LEICESTERSHIRE COUNTY COUNCIL
EDUCATION COMMITTEE

Annual Report

OF THE SCHOOL MEDICAL OFFICER FOR THE YEAR

1938

J. A. FAIRER, M.D., D.P.H.

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Alfred Tacey, Printer, Leicester.

17, Friar Lane,
Leicester.

Mr. Chairman, Ladies and Gentlemen,

I have the honour to present my Annual Report of the work of the County School Medical Service for the year 1938.

In the early part of the year the staff suffered a great loss by the tragic death of Dr. J. B. Dalton which occurred suddenly whilst carrying out his duties on February 23rd, 1938. This was a personal loss to me, for I had known Dr. Dalton for many years, having had the pleasure of working with him for a considerable time when I first qualified. The passing of this officer was mourned by many including the entire staff of the department and the teachers in the county to whom he was a very familiar figure; also by the children who not only held him in high regard but were very fond of their school doctor.

This depletion of the staff and the pending re-organisation under the Local Government Act, 1933 necessitated a temporary appointment being made and Dr. Grace Thompson was appointed as from 21st March, 1938.

The present medical and dental services have been somewhat extended during the year by the construction of the clinic in St. Martin's, Leicester, and the opening of the new health centre at South Wigston.

A scheme for the dental treatment of expectant and nursing mothers was inaugurated in March by the Maternity and Child Welfare Committee which affects this department in so far as the necessary treatment is undertaken by the school dental staff at sessions held at the various clinics.

There is little of interest to report in connection with infectious disease. The diphtheria epidemic abated during the early months of the year and the services of the staff were not required to any great extent to carry out immunisation. The previous efforts of the staff in this direction were amply rewarded, judging by the fact that in those districts where immunisation was undertaken, comparatively few cases were reported.

A minor outbreak of infantile paralysis occurred during the autumn and this is being specially investigated by Dr. A. A. Lisney.

I should like to thank Dr. A. W. S. Thompson and Dr. C. Walters for their articles entitled "The causes of Death at School Age," and "Myopia" respectively.

To Dr. A. A. Lisney, the deputy school medical officer, I am indebted for the compilation of this report and also to Mr. W. A. Thornton and his staff for the statistical information. It is entirely due to their efforts and hard work that I am able to produce this report at such an early date.

In conclusion I should like to express my appreciation of the unfailing interest of the Chairman in the work of this department and also of the consideration extended by the other members of the Committee, not only to myself but to all my staff.

I have the honour to be,

Your obedient servant,

J. A. FAIRER,

January, 1939. *School Medical Officer.*

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REPORT.

I.—GENERAL STATISTICS.

Population of the County.

The estimated population of Leicestershire as returned by the Registrar General in June, 1937, was 300,700. The Borough of Loughborough with a population of 30,200 is the only separate authority for elementary education within the administrative county. The total population with which the County Education Committee is concerned for purposes of elementary education is, therefore 270,500.

Number of Schools and Scholars.

There are 279 elementary schools in the county, 111 council schools and 168 voluntary schools. The average number of children on the rolls of elementary schools during the year was 33,372 and the average attendance 29,972, or 89.8 per cent.

II.—STAFF OF THE SCHOOL MEDICAL SERVICE.

School Medical Officer :

J. A. Fairer, M.D., D.P.H. (County Medical Officer of Health).

Deputy School Medical Officer :

A. A. Lisney, M.A., M.D., D.P.H. (Deputy County Medical Officer of Health),

Senior Assistant School Medical Officer :

A. W. S. Thompson, M.B., M.R.C.P. (Edin.), D.P.H. (Assistant County Medical Officer of Health).

Assistant School Medical Officers :

S. E. Murray, M.B., B.S.

J. B. Dalton, M.B., Ch.B. (*deceased* 23.2.38.).

Mary E. Weston, M.B., B.S.

Constance Walters, B.Sc., M.B., B.Ch. (School Oculist).

Grace Thompson, M.B., Ch.B. (*appointed temporarily* 21.3.38.).

School Dental Surgeon :

P. Ashton, L.D.S.

Assistant School Dental Surgeons :

A. E. Ward, L.D.S.
C. L. R. McLellan, L.D.S.
D. R. A. Wilcox, L.D.S.
L. D. Smith, L.D.S.
W. E. Lyne, L.D.S. (*appointed* 11.5.38.).

All the above officers are employed full time in the service of the authority.

During the year the department suffered a great loss by the tragic and sudden death of Dr. J. B. Dalton. Further reference to this sad loss is made in the introductory letter.

This necessitated a change in the personnel of the school medical department and in view of the pending appointment under the Local Government Act, 1933, Section 111 it was deemed advisable to make a temporary appointment until such time as something definite was decided.

It was therefore resolved to appoint Dr. Grace Thompson as assistant school medical officer to devote the whole of her time to the routine and special inspection of school children. Dr. Murray also devotes the whole of his time to school medical work. The duties of Dr. Walters are equally divided between maternity and child welfare work and the examination and treatment of school children suffering from defective vision. Dr. Weston devotes two-thirds of her time to school medical work and one-third to the maternity and child welfare service. The work of Dr. Lisney and Dr. Thompson consists chiefly of administration and only a portion of their time is allocated to the school medical service.

School Nurses.

Mrs. Warren (Superintendent).

†*Miss A. Addy, S.R.N.
Mrs. A. D. Antrobus, S.R.N.
†Miss C. E. Bangham, S.R.N.
Mrs. S. J. Bourne, S.R.N.
Mrs. P. Brunsdon, S.R.N.
†*Miss G. E. Butler, S.R.N.
*Mrs. F. E. Cade.
†Miss G. I. Carryer, S.R.N.

Miss M. A. Dilworth, S.R.N.
†Miss G. E. Earl, S.R.N.
†Miss E. Y. Feakin, S.R.N.
Miss L. Fox, S.R.N.
Miss T. M. Griffiths, S.R.N.
†Miss M. L. Hill, S.R.N. (*Appointed 11.11.38.*)
*Miss K. A. Marsh, S.R.N.
†Miss W. C. Porter, S.R.N.
†Miss C. M. Ryder, S.R.N.
Miss E. H. Seabrook.
Miss W. A. Simmons, S.R.N.
Mrs. E. E. Wright, S.R.N.

All the above are fully trained nurses and hold the certificate of the Central Midwives' Board. Those marked * hold the certificate of Sanitary Inspector and those marked † have the Health Visitors' certificate (Ministry of Health). The Superintendent holds the Child Welfare Workers' certificate.

III.—CO-ORDINATION.

As the medical services in the county are under the administrative control of the county medical officer, who is also school medical officer, co-ordination between the various branches is ensured and no wasteful overlapping occurs.

Supervision of the child during the first fourteen years of his existence is reasonably complete though a closer supervision of the toddler would be desirable. Much of the good work done at the welfare centres by the medical and health visiting staff is lost when the infant becomes a toddler, attends the welfare centre more and more infrequently and except for a few home visits by the health visitor ceases to come under the supervision of the medical services until school age is reached.

Some authorities overcome the discrepancy in supervision between infancy and school age by setting up nursery schools and toddlers' clinics but the uncertainty of such a provision being effective in a rural area is apparent. As an alternative a more complete scheme of home visiting could be inaugurated but this would of course necessitate the augmentation of the present health visiting staff.

The school medical and maternity and child welfare services

work in particularly close co-operation, functioning largely as one unit. This arrangement is facilitated by the fact that the school nurses act as health visitors and are thus able to visit the home of each child regularly from birth to adolescence. A detailed record is kept throughout infancy and to a lesser extent during the toddler stage. When the child commences to attend school, any information with regard to previous illnesses is transferred to the medical record card for the use of the school medical officer who finds the earlier history of much value when assessing the child's state of health as an entrant.

The school medical service is also closely co-ordinated with other branches of health work, the school medical officers co-operating with the district medical officers and tuberculosis officers in dealing with children suffering from infectious disease and tuberculosis respectively.

IV.—MEDICAL INSPECTION.

Routine medical inspections of the scheduled age groups as laid down by the Board of Education are completed each year and in addition a number of special examinations are undertaken which include children found to be defective at an earlier routine inspection.

The assistant school medical officers devote most of their time to routine and special examinations, sessions for this purpose being held at the schools. Special home visits are often necessary, particularly in connection with the examination of physically and mentally defective children.

Complete records are kept of each child inspected, general progress and any treatment carried out being entered on the cards which are retained at the central office and issued as and when the inspections take place. This arrangement is much more satisfactory than the practice adopted by some authorities of allowing the record cards to be retained at the schools.

Disturbance of school routine during a medical examination is avoided as much as possible though this is found to be impossible in the rural schools which are not adequately equipped for medical inspection purposes. In the modern schools, however, the provision of a medical inspection room has proved of great benefit to both medical officer and teacher as the medical examination of the

children can be carried out efficiently and quietly without disturbing the teachers.

The total number of children examined in the scheduled age groups at routine medical inspection in the schools was as follows :—

Elementary schools	....	....	....	10,615
Secondary schools	....	....	....	1,629

It will be noted that the number of routine inspections of elementary school children has increased. Although the recent extension of the city boundary resulted in an appreciable decline in the school population, the building estates are still extending further into the county and consequently the school population will undoubtedly increase within the next few years.

V.—FINDINGS OF MEDICAL INSPECTION.

(*a*) *Uncleanliness.*

Cases of uncleanliness, however slight, are promptly referred to the school nurses who, during the year, were notified of 292 cases discovered at routine examinations. These cases were entered on their books for visiting. 189 cases were reported as a result of school inspections and 103 notified from the school clinics.

The school nurses themselves discovered 5,090 cases where some degree of uncleanliness was manifest. These children were detected at the routine visits to schools when 110,247 children came under observation at march past inspections.

Last year's corresponding figures were 4,774 and 110,471 respectively.

Attention has been called, in previous reports, to the fact that all children showing signs of uncleanliness, however slight, are included in these figures and the same procedure has again been followed.

The assistant school medical officers excluded from school 24 verminous children during the year. These were immediately referred to the school nurses who visited the homes and advised the parents as to the best and easiest method of cleansing the children.

(*b*) *Minor Ailments.*

Most of the cases coming under this heading are advised to attend the various school clinics or their own doctors. The office clinic is still available on Saturday mornings for the treatment of this type of case and acts as a valuable supplement to the other clinics in the county.

(*c*) *Tonsils and Adenoids.*

During the year 1.063 children were referred for treatment from routine and special inspections. Of this total 564 children had enlarged tonsils only, 140 suffered from adenoids, 327 from adenoids and enlarged tonsils and 32 were reported as having some other abnormal condition of the nose and throat requiring treatment.

In addition, 751 children were noted as having a defect of the nose and throat requiring to be kept under observation.

During the routine inspections 1,384 cases or 13.6 per cent. of the total number inspected were reported as having some defect of the nose and throat. In 670 or 6.6 per cent. of these cases surgical interference was recommended. The corresponding figures for last year were 571 and 5.5 per cent. respectively.

The number of cases referred from special examinations was 393 children for treatment and 37 for observation.

(*d*) *Tuberculosis.*

No definite cases of pulmonary tuberculosis were discovered during routine inspections, but one case of suspected pulmonary tuberculosis was referred to the tuberculosis medical officers for investigation and one required to be kept under observation.

From special examinations, 7 cases were referred for treatment and 4 for observation.

A total of 9 cases of non-pulmonary tuberculosis was reported, 3 from routine inspections for observation only and 6 from special examinations for treatment.

(*e*) *Defective Vision and Squint.*

All defects of this nature are immediately referred to the school oculist and 929 defects were reported. Of these 728 were defective vision and 201 showed some degree of squint.

In addition, 37 defects were entered on the books as requiring to be kept under observation.

(*f*) *External Eye Disease.*

These cases are also referred to the school oculist and 190 defects were reported for treatment, *viz.*: blepharitis 146 ; conjunctivitis 19 ; corneal opacities 2 ; and other conditions 23.

In a few cases treatment was not advised and 32 defects were noted and kept under observation.

(*g*) *Ear Disease and Hearing.*

The number of children referred for treatment under this heading was 182 ; 57 cases being reported from routine and 125 from special inspections.

These cases included 32 children with defective hearing, 118 suffering from otitis media and 32 classified as other diseases of the ear.

The number recommended for observation only was 37.

(*h*) *Dental Defects.*

Parents of children requiring urgent dental treatment apply direct to the dental officer of their particular district and cases are not normally referred by the assistant school medical officers unless of a very acute nature.

Records are kept at the time of routine inspection of all children with four or more carious teeth and 2,305 such cases were recorded.

(*i*) *Crippling Defects.*

These cases are all reported to the central office to enable arrangements for immediate treatment to be made if necessary and 67 cases have been notified for treatment and 46 for observation.

Of the cases for treatment 5 were rickets, 6 spinal curvature and 56 other forms of crippling defect.

(*j*) *Delicate Children.*

As was mentioned last year it is very difficult to arrive at anything like an accurate figure as regards the number of delicate children. A register of pre-tubercular children is kept up-to-date but it is impossible, without frequent re-examination, to record every delicate child in the county.

During routine inspections only 26 cases were recommended for treatment for malnutrition and 9 for observation, but 98 cases of anaemia were referred for treatment and 34 for observation.

(*k*) *Nutrition.*

All children examined at routine inspections are classified according to the recommendation of the Board of Education and comprise four groups—"A" excellent, "B" normal, "C" slightly sub-normal and "D" bad.

The statistics are shown in Table II C. in the appendix of this report. The percentages in the four groups are excellent 17.7, normal 75.2, slight sub-normal 6.9, and bad 0.2.

When compared with last year these figures show very little variation.

Efforts have been made during the year under review to ensure that each medical officer adopts the same method in assessing the nutrition of the children examined, as it is realised that if different standards are used it will have a material effect upon any conclusions arrived at.

An investigation is still being carried out into all cases classified as sub-normal and bad but owing to the number of enquiries and re-examinations necessary it will not be completed until the summer of 1939.

VI.—INFECTIOUS DISEASE.

It is a pleasure to be able to report that during 1938, infectious diseases caused less interference with education than in any year since 1930. It was only found necessary to close five schools and exclude two classes in another, the causes being as follows :—

	No. of Schools.	Average Period in "School" Days.	No. of Children Affected.
Measles	4	14	141
Scarlet Fever	1	15	15
Diphtheria	Bridge Road Infants School, Coalville Classes II and III	10	80

Certificates of low attendance due to the prevalence of infectious illnesses were issued in the case of 48 schools :—

	No. of Schools.	Average Period in "School" Days.
Measles	20	11.25
Chicken Pox	6	12.5
Coughs and Colds	4	5
Whooping Cough	4	8.75
Mumps	3	10
Epidemic Jaundice	1	5
Diphtheria	1	10
Measles and Chicken Pox	3	10
Measles and Scarlet Fever	1	7
Measles, Mumps and Chicken Pox	1	5
Measles and Influenza	1	20
Mumps and Chicken Pox	1	20
Mumps and Whooping Cough	1	5
Scarlet Fever and Colds	1	5

As usual, measles was the villain of the piece. This year, however, influenza was not common, and to this may be largely attributed the comparatively small amount of interference with school work. Measles and influenza, on account of their very highly infectious nature, are the principal causes of low attendance. As killers, however, they are not nearly so potent as diphtheria, that great enemy of childhood. The following table sets out the number of deaths among school children from six infectious diseases, in five-year periods, since 1903.

TABLE I.

Deaths of School Children from Certain Infectious Diseases.

	1903 to 1907	1908 to 1912	1913 to 1915	1919 to 1922	1923 to 1927	1928 to 1932	1933 to 1937	Total in 35 Years.
Diphtheria	87	84	52	83	50	53	46	455
Scarlet Fever	27	29	5	8	7	11	8	95
Measles	7	22	15	21	12	10	7	94
Influenza	4	10	4	24	13	18	3	76
Enteric Fever	6	11	4	2	1	1	1	26
Whooping Cough	9	1	4	2	4	2	3	25

These infectious diseases have accounted for nearly a quarter of

the total deaths at school age since the beginning of the century. The outstanding importance of diphtheria is clearly shown in the table.

If, therefore, we look at infectious disease in school children from the point of view of the parent, measles and influenza, though important, are not nearly so much to be feared as diphtheria. What makes it even more worthy of the attention of parents is, of course, the fact that diphtheria is preventable, while the other conditions, broadly speaking, are not. Teachers should lose no opportunity of impressing the facts about diphtheria prophylaxis upon parents, and should urge them to consult their private medical practitioners about it. Immunisation—it cannot be too often repeated—is cheap, safe, sure and painless. If parents knew this, and could be made to appreciate the danger which a non-immune child runs in its daily contact with its fellows at school, few would fail to have their children immunised.

In 1937, as mentioned in the last school annual report, active immunisation was carried out in certain districts where diphtheria was prevalent. Early in 1938 children in two more areas—South Wigston and Mountsorrel— were immunised by members of the county staff ; in certain other districts schemes, in which treatment is given by local practitioners, have come into operation.

Up to the end of 1938, a total of 2,546 children had been given full courses of prophylactic injections by the county staff. In all cases the cost is recovered from the council of the district in which the child resides. The response to the offer of immunisation has been very satisfactory, about 80 per cent. of the total number of children on the rolls accepting. 97 per cent. of these children completed the full course of three injections.

In every area where immunisation was carried out, the epidemic there prevalent ceased with remarkable rapidity. The following table shows the number of cases of diphtheria admitted to hospital from five of these districts in 1938 and the three preceding years:—

TABLE II.

Cases of Diphtheria Admitted to Hospital from Five Districts.

	1935	1936	1937	1938
Markfield	Nil	45	20	2
Shepshed	7	2	34	1
Rothley	1	4	5	4
Quorn	Nil	2	13	3
Mountsorrel	Nil	6	3	1
Total Cases	**8**	**59**	**75**	**11**
Average Age	13 years	$12\frac{1}{4}$ years	$8\frac{3}{4}$ years	19 years
Percentage under age 15 years	75% (6)	75%	89%	55% (6)

It will be noted that there were only eleven cases during 1938, and that the average age of these cases was considerably above that of cases occurring previous to immunisation—being raised by the number of persons over school age who had not been rendered immune. Examining further these eleven cases, we find that :—

6 had not been immunised
(Ages 3, 19, 21, 29, 32 and 65 years).
1 had only received 1 injection.
3 had only received 2 injections.
(All taken ill less than 6 weeks after first injection).

No fully immunised child was ill enough to require removal to hospital.

South Wigston, where in April immunisation was carried out in three schools, was not included in the above as the immunised area was ill-defined. During 1938, 19 cases of diphtheria went to hospital from South Wigston. Two of these had received two injections, and were taken ill less than a month after getting the first. None of the others had been immunised. Again, no immunised child required to be removed to hospital.

It is generally agreed that the strongest immunity does not develop for at least six weeks after completion of a course of injections. The above figures are therefore very encouraging. The rise in the average age of cases after an immunisation campaign is interesting, and carries with it a warning ; for it rather suggests that the danger to the unprotected individual is increased when the proportion of artifically immunised persons in the population rises.

To find five victims out of eleven over the age of nineteen is certainly unusual in the case of diphtheria, which notoriously attacks the young ; compare the year 1938 with 1935 (Table II) when only two out of eight were adults. The moral is—let the individual parent protect his own child as he will ; but if a public authority undertakes immunisation it must take care to immunise a reasonably large proportion of the population. It is generally computed that to immunise less than thirty per cent. involves the danger of increasing the number of carriers and, therefore, of jeopardising the non-immune majority. Private persons can afford to care for the individual; public bodies must have regard to the welfare of the community as a whole.

Under the county scheme, we have never immunised *less* than seventy per cent. of the school population in any area.

The following are statistics of diphtheria immunisation and throat swabbing in 1938 :—

DIPHTHERIA IMMUNISATION.

South Wigston : Bassett Street Council Schools.

Immunisation commenced—March 31st, 1938.
completed—April 27th, 1938
708 children received full course (3 injections).
7 received 2 injections only.
5 received 1 injection only.
(These figures include pre-school children).

Mountsorrel :

Immunisation commenced—January 15th, 1938.
completed—February 12th, 1938.
208 children received full course (3 injections).
3 children received 2 injections only.
7 children received 1 injection only.
(These figures include pre-school children).

THROAT SWABS FROM SCHOOL CHILDREN.

Number examined in County Laboratory	47
Positive for B. Diphtheriæ	2
Negative for B. Diphtheriæ	45

Epidemic Catarrhal Jaundice.

A rather scattered outbreak of epidemic catarrhal jaundice commenced in April, and a few cases continued to occur up to the end of the year. The places chiefly affected were Kegworth and Burbage ; other cases occurring at Eaton and Eastwell. The outbreak is being investigated by the deputy school medical officer, and to date about 170 cases have been recorded.

Anterior Poliomyelitis.

A small number of cases of acute anterior poliomyelitis ("Infantile Paralysis") were notified in the last quarter of the year, a minority being school children. The districts concerned were very widely separated, Shepshed and the Melton Mowbray neighbourhood being most affected. Investigation of this outbreak is not yet complete.

Scabies.

During the last few years, the number of cases of scabies ("The Itch") among school children in the county seems to have been on the increase. This is a contagious condition, caused by a tiny parasite known as the *acarus scabiei*. The male parasite lives on the surface of the skin, but the female burrows into it, causing an irritable skin eruption which is especially troublesome at night when the patient is in bed. The disease has a characteristic distribution, beginning usually on the backs of the hands between the fingers, or on the fronts of the wrists.

Scabies is not, as is generally supposed, a condition caused by "dirt." Anyone may contract it ; but when one person in a household is affected, neglect of treatment and proper precautions will facilitate its spread to other members of the family. It is generally transferred by infection of the bed clothes, and is usually introduced into the household by a visitor, or by some person who has been away from home and has come in contact with infected bedding. It is only rarely passed directly from one child in a classroom to another.

The essential thing in treatment is to get precise directions from a doctor. It is useless to buy a box of ointment and merely "rub it in." The practitioner should write down the routine of treatment for the patient, and it is important that not only the patient himself, but his clothing, blankets and sheets should all be dealt with.

Properly treated, the worst case of scabies can be cleared up in less than a week. Unfortunately in some instances parents either cannot or will not carry out the directions of the doctor, and in this case, it is usually necessary to remove the child for treatment to an institution. This was done in a number of cases during 1938, with satisfactory results.

I make no apology for giving the above information which may be helpful to teachers who are worried by the occurrence of cases among their pupils.

VII.—FOLLOWING UP.

During the year the following number of visits for the purpose of following up were made by the school nurses :—

First visits	2,783
Second visits....	719
Special visits....	586

The parents of children found at routine or special inspections to be suffering from defects which require treatment are advised by the school medical officer either to consult their own doctor or take advantage of the treatment provided by the education authority at a clinic or hospital. In order to ascertain whether the necessary treatment has been carried out or to report on progress, the school nurses carry out home visits. It is sometimes found that several visits are necessary to those families where the parents are slow or disinclined to obtain the treatment recommended for their children. Definite refusal by the parents is rare, persuasion by the nurse usually being successful.

At regular intervals cleanliness inspections are made in all schools by the nurses who follow up by means of home visits those children found to be unclean. Advice and assistance as to the best means of securing improvement is offered to the parents. Further visits are made in order to ascertain whether improvement is maintained and the children do not return to school until the school nurses are satisfied that they are quite clean.

The homes of children excluded from school suffering from infectious or contagious disease are also visited and visits are made for other purposes such as investigations into and reports on home conditions.

This system of following up by the school nurses contributes appreciably to the success of school medical inspection. Visits by the nurse are very necessary when parents adopt an apathetic attitude and delay treatment which may be urgent. Thus the possibility of children suffering for want of attention is minimised.

VIII.—MEDICAL TREATMENT.

(*a*) *Minor Ailments.*

Cases of this description are treated at the various clinics in the county by the authority's own medical officers.

The alterations to the clinic in Leicester were completed during the latter end of the year and the building now forms a very compact dental and minor ailments clinic, complete with surgery, waiting rooms, medical examination rooms and recovery room. The remainder of the building is occupied by the county laboratory.

The health centre at South Wigston is now completed with the exception of the furniture, approval for which has not yet been received from the Board of Education. It is anticipated that this approval will be forthcoming in the very near future and that work will commence in the new year. A minor ailment clinic will be held on one morning each week under the supervision of a medical officer and dental clinics and examinations in connection with the treatment of cases of defective vision will also be undertaken. A dental clinic will be held on Saturday mornings for the treatment of urgent cases.

The numbers of attendances at the present clinics were as follows:—

	Children.	Attendances.
Hinckley	489	1,023
Coalville	389	925
Melton Mowbray	473	1,428
Leicester	207	220
	1,558	3,596

At Coalville and Melton Mowbray two sessions per week are held, at one of which the medical officer attends, and at the other the school nurse is in charge.

The clinics at Hinckley and Leicester are only held once a week, a medical officer being in attendance.

All these clinics are supervised by the same medical officer and consequently the records and statistics are standardised. With the opening of a minor ailment clinic at South Wigston it will not be possible to preserve the continuity of medical supervision and it will be necessary for a different medical officer to take charge of one of the present clinics.

One great advantage of these clinics is the fact that teachers may send dirty or verminous children to the nearest clinic for advice and treatment by a medical officer. The total number of cases attending during the year was 103 and in some cases it was necessary to exclude the children from school until the medical officer was satisfied as to their fit condition to return.

In the more rural parts of the county where no clinic is available, this type of case is usually followed up by the school nurse. If no improvement is forthcoming within a reasonable period arrangements are made for the child concerned to be specially examined at school or at home by a medical officer.

As pointed out in previous reports the majority of these cases are old offenders with whom cleanliness is only a secondary consideration. Prosecution and the efforts of the N.S.P.C.C. officers have little effect and consequently these cases are continually on and off our registers.

Nit combs are still supplied to parents at cost price and in necessitous cases are loaned through the school nurses to parents who are anxious to keep their children clean.

(b) Tonsils and Adenoids.

The medical officers have referred 1,063 cases for treatment during the year ; tonsils only 564, adenoids only 140, tonsils and adenoids 327, and other conditions of the nose and throat 32.

The number referred for treatment last year was 911.

Treatment is undertaken through the county scheme and operations were performed at the Leicester City Clinic, the Lough-

borough General Hospital and the various Cottage Hospitals in the county as follows :—

Leicester City Clinic	288
Melton Mowbray Hospital	62
Loughborough Hospital	7
Ashby-de-la-Zouch Hospital	4
Market Harborough Hospital	3
Lutterworth Hospital	1

The total number of children who received operative treatment was 407, but 42 of these were undertaken privately.

These 365 cases dealt with under the council's scheme cost approximately £493 but of this amount £285 was contributed by the parents, leaving a net amount of £208 chargeable to this Committee.

Only cases referred by our own medical officers are dealt with and in all cases a preliminary examination is undertaken before the final operation is performed.

(*c*) *Tuberculosis.*

Provision is made for the treatment of tubercular children at the Markfield Sanatorium where 22 beds are allocated for their accommodation. A teacher is included on the staff of this hospital and children may continue their education uninterrupted if their health permits.

During the year 42 children were admitted to this institution of which 14 were cases of abdominal or glandular tuberculosis.

Surgical cases only can also be treated at St. Gerard's Hospital, Coleshill, Harlow Wood Orthopædic Hospital, Leicester City General Hospital and Gringley on the Hill Children's Hospital. A total of 15 children were admitted to these hospitals during the year.

Out-patient treatment is provided at the orthopædic clinics at Hinckley, Coalville, Loughborough, Leicester and the Leicester Royal Infirmary.

(*d*) *Skin Diseases.*

Any form of skin disease can be treated at the school clinics if it is convenient for patients to attend. With the increase of

inter-communication between villages these clinics cover a far wider area than was ever anticipated.

In the very rural parts of the county these cases are usually dealt with by the general practitioners.

Once more impetigo heads the list as the most common skin disease, 91 cases being treated at the clinics and 189 by private arrangements.

The number of cases of scabies treated during the year shows an increase. 21 cases were dealt with through the clinics and 26 privately.

Treatment of ringworm by local applications of ointment and lotions is undertaken by the assistant school medical officers and during the year 30 such cases attended the clinics. In addition 42 children were known to have had private treatment.

In very obstinate cases of this disease X-ray treatment is recommended and may be obtained under an arrangement with the Leicester city authorities. No case was considered sufficiently severe to warrant this type of treatment during the year.

Specimens of hair are still submitted to the laboratory for examination and during the year 38 were examined, of which 22 proved positive.

Other forms of skin disease are also treated at the clinics and 112 children were dealt with.

In Table IV we are required to state the number of children treated for various skin diseases otherwise than under the authority's scheme. The figures included in this table are obviously not a true record as it is impossible without returns from general practitioners and hospitals to give anything like a correct total. The numbers shown in the table are those of children actually known to have received some form of treatment.

(*e*) *Ear Diseases and Defects.*

Any case recommended for treatment for diseases and defects of the ear are treated by arrangement with the city authority at their clinic at Richmond House.

During the year, 35 children were referred to this clinic and of these 4 did not attend or refused treatment. The children treated made 172 attendances, 2 were recommended for operative treatment and 25 were discharged as cured. The remainder are still continuing treatment.

IX.—DENTAL TREATMENT.

During the present year 23,325 children have been examined at routine visits to schools and 1,723 were not examined under the regulations which exclude children from the dental scheme when the parents have refused treatment on two occasions.

The average attendance of children at the schools visited was 25,048 and includes those cases mentioned above as having been excluded from the scheme. The corresponding figure for the county was 31,500 leaving an average attendance of 6,452 children attending the schools which were not visited by any of the dental staff.

At the end of last year this figure was 8,582. More children have been dealt with this year as an additional assistant dental surgeon was appointed during the year and commenced duty early in May.

This necessitated some reorganisation of the dental scheme and the county was consequently divided into six districts instead of five as previously. The sixth district was formed out of the nucleus of three previous areas referred to as numbers 3, 4 and 5 in my last report.

Districts 1 and 2 were not affected by the reorganisation and have again been completed during the year under review.

District number 3 was practically completed, two schools not being visited, owing to the unfortunate illness of the dental officer in charge.

Districts number 4 and 5 were not completed.

District number 6 which was formed of some schools in which the children had already been examined in the early part of the year, with the addition of others previously included in districts 3, 4 and 5 was also completed.

The disturbing factor in the present scheme is obviously districts 4 and 5 as at present constituted. In my last report I called attention to the work in these two districts and this year has seen no appreciable difference. Although the number of children dealt with by the dental officers in these areas has fallen, the amount of work undertaken has risen by $4\frac{1}{2}$ per cent.

Before the appointment of the extra dental surgeon the officers from numbers 1 and 5 areas were working for some time in schools now included in number 6 area. As this will not be necessary during the next year the officer in charge of number 5 district will have more time to devote to his own area and the dental surgeon from number 1 district will be able to give some assistance to the officer in charge of number 4 district. It is hoped, therefore, that the position in these two districts (4 and 5) will be considerably improved by the end of the coming year.

As will be seen from the statistical tables, the number of fillings and extractions completed has considerably increased as is natural with the employment of an extra dental officer. The number of special cases has also increased owing to the fact that several schools have not had a systematic visit and urgent cases have been dealt with at the Saturday morning clinics.

No routine school time has been devoted to the treatment of these special cases, appointments having been made for the children to attend the clinics on Saturday mornings and during the school holidays.

Out of the total number of treatment sessions, 180 were devoted to these special cases.

At routine inspections, 14,518 children were offered treatment and 11,780 accepted and were given complete treatment. The remaining 2,738 were classified as refusals giving a percentage of 18.8 as compared with 23 last year.

Whilst discussing the question of refusals I would like to mention the procedure adopted in this county whereby the teachers are notified of the percentage of acceptances of treatment in each individual school.

A letter is sent by the Director of Education to all head teachers as follows :—

"You may be interested to know how your school stands in relation to the rest of the county in the matter of the percentage of acceptances of dental treatment.

The figures this year are as follows :—

Highest percentage of acceptances			....	100
Lowest percentage of acceptances			....	44.5
Percentage for the county	....	....	....	81.2
Percentage in your school	....	....	....	—

It will be understood that these percentages apply to actual treatment by the dental surgeons, and do not include any treatment which may have been provided privately.

The Committee are anxious that the fullest possible advantage shall be taken of the services of the dental surgeons, seeing that dental inspection without subsequent treatment is of little value."

In schools with an average attendance of over 200, there is not such a possibility of every child accepting treatment as is likely in a small school of 20 or 30 children.

In some districts of the county the acceptance rate is consistently lower than the average, and in spite of the persistent efforts of the teachers and dental staff, little progress appears to be made.

The number of children excluded from the scheme after two refusals to accept treatment has risen to 1,723 and this figure will probably continue to rise as a few are added each year, but it is hoped that it will stabilise eventually as the older scholars leave school. By that time I anticipate that the refusal regulations will have a definite salutary effect and that this figure will become considerably less.

General anæsthetics were administered in 7 cases and all were undertaken at the Leicester clinic. A medical officer was present in each case.

Parents are still required to pay 6d. per year for each child's

treatment except in necessitous cases and the contributions this year have increased when compared with the year 1937.

During the year the Maternity and Child Welfare Committee introduced a scheme for the dental treatment of expectant and nursing mothers and my department was instructed to undertake this work by the Medical Inspection Committee.

Cases are referred by the medical officers in charge of the ante-natal clinics and infant welfare centres and also by general practitioners, and receive treatment at the various clinics on Saturday mornings and during the school holidays.

The number dealt with during the year, the first that such a scheme has been in operation, was naturally small and has not in any way interfered with the usual treatment of urgent cases from the elementary schools.

It is at present impossible to give any indication as to how long this method of dealing with these cases will be practicable but it is not expected that any serious disorganisation will take place.

The charges for this treatment are based on the National Health Insurance scheme and payment is made by the Maternity and Child Welfare Committee according to the work required and the number of cases dealt with.

As no dental work room is provided, the work in connection with the supply of dentures is undertaken by a private firm of mechanics to the dental profession.

In conclusion I again tender my thanks to the whole of the dental staff for their work and the interest displayed in the scheme and also to the medical and nursing staffs for their willing co-operation throughout the year.

I cannot conclude without once more expressing my appreciation of the help I have received at all times from the head teachers and assistant teachers in this county. Without their whole-hearted support I fully realise that any dental scheme must be a heart-breaking task practically doomed to failure.

PERCY ASHTON,
School Dental Surgeon.

X.—TREATMENT OF DEFECTIVE VISION.

The number of children examined by the school oculist during the year was 1,948.

The assistant school medical officers refer all cases of defective vision and other diseases of the eye to the school oculist. The children are examined on the school premises or in the various clinics as soon after the school medical officer's visit as possible. Time is still allowed for the refraction of urgent cases at the clinic in Leicester on Saturday mornings.

Difficulty still exists in the provision of suitable dark rooms in the small rural schools and consequently the hiring of rooms in private houses is necessary.

When the school oculist visited the schools all children who were tested in 1936 were seen again and the ones who needed to be re-examined were referred for detailed examination at a subsequent date.

Cases of myopia, mixed astigmatism and some early squints are examined annually.

During the course of routine and special inspections carried out by the assistant school medical officers, 1,119 defects were referred for treatment—762 from routine and 357 from special inspections. Some of the children requiring examination already had glasses provided through the school medical service but were in need of a change of lens or lenses and consequently of further examination.

These 1,119 defects are summarised as follows :—

Blepharitis 146, conjunctivitis 19, corneal opacities 2, defective vision 728, squint 201, and other conditions 23.

Homatropine and cocaine is still used as the routine mydriatic and consent of the parent is obtained through the school nurse before the actual refraction. In 41 of the cases recommended for refraction, this consent was refused and in addition 40 children were absent at the time of the doctor's visit.

The number of completed examinations was 1,867 and is summarised as follows :—

Glasses not necessary	286	340
Present glasses satisfactory	54	
Refractive errors only and requiring glasses	1,366	1,527
Other diseases of the eye and refractive errors requiring correction	161	

The total number of children requiring correction by glasses was therefore 1,527 and these cases are divided as follows :—

1,047 (68.57%) cases of hypermetropia
328 (21.48%) cases of myopia
108 (7.07%) cases of mixed astigmatism
44 (2.88%) cases of myopia and hypermetropia

A record is also kept of any children showing signs of strabismus and the following cases were recorded during the year :—

Internal concomitant strabismus	283
External ,, ,, ...	25
Internal alternating ,, ...	101
External ,, ,, ...	16
	425

During the last five years the cases refracted show the following percentage of diseases and defects :—

	Hypermetropia	Myopia	Mixed Astigmatism	Myopia and Hypermetropia	Squint
1934	67.53%	21.82%	8.69%	2.58%	12.14%
1935	66.42%	22.35%	8.86%	2.31%	9.25%
1936	65.73%	25.21%	7.26%	1.79%	24.71%
1937	67.45%	23.45%	7.33%	1.77%	30.72%
1938	68.57%	21.48%	7.07%	2.88%	27.83%

There does not appear to be any considerable variation in these percentages over the last five years beyond the fact that the number of cases of squint has increased, probably because parents and teachers are becoming more alert in noticing them. The records for the last ten years also show very little variation.

The following diseases were diagnosed during the examination of

children referred to the school oculist and they are arranged under their anatomical headings :—

Eyelids.

Styes 48 : blepharitis 84 ; meibomian cyst 1 ; ptosis 10 ; oedema of eyelids 2.

Conjunctiva.

Catarrhal conjunctivitis 40 ; conjunctival cyst 1.

Lachrymal Apparatus.

Chronic dacryocystitis 3.

Cornea.

Corneal ulcer 5 ; corneal nebulæ 12.

Uveal Tract.

Anterior synechia 1 ; posterior synechia 1 ; coloboma iris and chorioid 2 ; chorioiditis 5 ; buphthalmos 1 ; persistent hyaloid canal 1 ; rupture of chorioid 1.

Lens.

Posterior polar cataract 2 ; lamellax cataracts 3 ; subluxation of lenses 3.

Muscular Apparatus.

Congenital nystagmus 13.

PROVISION OF SPECTACLES.

Spectacles are still provided through the school medical department whether paid for by the parents or provided free by the Committee.

The total number of glasses supplied was 1,389 and is a slight decrease on last year's figure of 1,460. Included in this figure of 1,389 are a considerable number of cases who although obtaining their glasses during the present year were examined and prescribed for at the end of 1937. The number of children examined and the number who obtained glasses is, therefore, not comparable.

Of the total number supplied, 166 were provided free of charge to necessitous cases. In every other case the cost of the glasses

or lenses was borne by the parents and the glasses were obtained from the committee's opticians.

The type of frames obtained were as follows :—shellite 594 ; gold 37 ; nickel 410 ; and new lenses only 348.

A local firm of opticians have continued to supply the glasses and their work has proved more than satisfactory and of a very high standard.

Large numbers of children continue to be supplied with new lenses thus effecting a considerable saving to the parents as frames are only changed when they are too small to be a correct fit.

Repairs are still carried out for parents at their own expense and 136 pairs of spectacles were dealt with during the year.

In addition to the 1,389 pairs of glasses provided through the department, 32 were obtained privately by the parents.

At the end of the year 361 children were on our registers as requiring glasses. The majority of these cases were only examined during the last few weeks of the year and it is anticipated that a large number of the parents will obtain the glasses early in the new year.

Children with only slight errors of refraction are kept under observation but no extra pressure is brought to bear on the parents to provide glasses unless the child's condition becomes more serious. Very little difficulty is experienced with the parents of children whose defects are of a more serious nature and the communications sent out from the central office usually have the desired effect of persuading the parents to obtain the glasses prescribed.

There still exists the obstinate type of parent who looks upon our advice as a transgression on their parental responsibilities but fortunately such cases are few and far between. When, however, such a case arises the advice and assistance of the officers of the N.S.P.C.C. is obtained and the regard in which these officers are held usually results in a satisfactory conclusion of the case after the first visit.

Little or no difficulty is encountered with cases who plead

poverty as the committee's scale is quite lenient and free glasses are provided in all necessitous cases. The financial circumstances of the parents are assessed before the glasses are supplied.

Special attention is still paid to all cases of myopia in order to ensure that proper glasses or treatment is provided.

As has been previously pointed out the work of the officers of the N.S.P.C.C. is invaluable in a scheme of this description and one cannot speak too highly of the help accorded by these officers to the school medical department.

XI.—COUNTY ORTHOPAEDIC SCHEME.

Full details of the county orthopædic scheme have been given in my previous reports and it is not considered necessary to include them again this year. The present arrangements are the same with the exception of a minor extension. The committee have now agreed to the treatment of out-patients at the Rugby orthopædic clinic and in-patients at the hospital of St. Cross, Rugby. As there will be only odd cases from the southern portion of the county, it is not anticipated that the extra cost will make any appreciable difference to the total expenditure for this form of treatment.

The Leicestershire Voluntary Association for Cripples' Welfare have made valuable headway during the present year and district committees have been formed throughout the county, whose willing co-operation has been sought on numerous occasions by my staff. Home visiting is also undertaken by these committees and has proved very helpful in cases where parents were averse to treatment.

Five clinics are available for treatment, two under the direct control of the County Council, two administered by voluntary agencies and one by the Leicester City Education Committee.

Continuity of treatment is secured as in-patients are treated in the parent hospitals by the same surgeons and staff who have charge of the out-patient clinics.

WORK OF THE ORTHOPAEDIC CLINICS.

(*a*) *Coalville Clinic.*

During the year 94 sessions were held and 1,665 attendances were made by children suffering from some form of crippling defect. Last year the corresponding figures were 96 and 2,068.

The types of treatment given were :—muscle re-education exercises 663; massage 469; electrical treatment 466; radiant heat 280; sunlight treatment 93; application and supervision of splints 51; plaster treatment 61; dressings 81; and in addition, 290 general supervision and after-care examinations were made.

The number of children who attended was 140 and the average attendance per session was 17.7.

(*b*) *Hinckley Clinic.*

At this clinic 95 sessions were held and 1,992 attendances were made by children with crippling defects. Last year the corresponding figures were 97 and 1,682.

The types of treatment given were :—muscle re-education exercises 1,188; massage 253; electrical treatment 265; sunlight treatment 104; application and supervision of splints 51; plaster treatment 72; dressings 181, and 430 general after-care examinations were made.

The number of children who attended was 137 and the average attendance per session was 21.

(*c*) *Loughborough Cripples' Guild.*

Treatment was given at this clinic to county cases and a total of 116 attendances was made during the year.

The number of individual children who attended was 7.

(*d*) *Leicester City Clinic.*

During the year 14 new cases were referred from the county to this clinic. The number of children attending was 19 and the number of attendances made for out-patient treatment was 363.

(*e*) *In-patient Treatment.*

The following is a summary of the cases who received in-patient treatment during the year.

Hospital.	Boys.	Girls.
City Clinic	1	3
City General Hospital, Leicester	8	2
Coleshill Hospital	11	11
Harlow Wood Hospital	3	1

Of the total of 40 cases admitted during the year, 9 still remained in hospital on 31st December, 1938.

XII.—OPEN-AIR EDUCATION.

Fresh air and sunlight, which are so essential to the health of the child are necessary during school hours. The classrooms of all the modern schools in the county are constructed on open-air lines. This is a great improvement on the older type of school where the children are deprived of the benefit to be derived from being taught in airy and well lighted classrooms.

Satisfactory as is the open-air construction of the modern schools they hardly take the place of open-air schools which are provided by some education authorities for delicate and debilitated children, particularly those suffering from rheumatism, anæmia, pre-tubercular symptoms or malnutrition. The improvement and marked progress observed in the majority of children attending these schools fully justifies the cost of their provision and upkeep and it is found that even a short stay at an open-air school enables a number of the children to return to the ordinary school better able to cope with their studies.

XIII.—CO-OPERATION OF PARENTS.

The co-operation of parents is essential in order to obtain a complete record of the past history of each child at the routine medical inspection. This is particularly applicable in the case of entrant and intermediate inspections where the children are too young to give an accurate account of previous illnesses.

Invitations are therefore sent out to parents before all routine medical inspections for them to attend the school while the inspection is in progress and it is gratifying to note that in the majority of cases the parents respond. This is not only satisfactory because it

enables the medical officer to procure as complete a record of each child as possible but because of the keen interest displayed by the parents in the welfare and well-being of their children.

The interest and goodwill of the parents is important when special advice or treatment is necessary and the time taken by the medical officer to explain the necessity for any advice given or treatment required in order to obtain the full co-operation of the parent is time well spent.

In some instances parents are resentful and refuse to allow their children to be medically examined either through prejudice or a sense of false pride. In other instances they are either slow or negligent in carrying out the advice given by the medical officer in obtaining necessary treatment. The following-up by the school nursing staff assists in overcoming this resistance which, due to more widespread knowledge, is more rarely met with than formerly.

Many parents attend the school clinics with their children in order to obtain advice on health matters from the medical officer in charge. The number of parents and children attending these clinics, in the districts where they are provided, shows that the facilities available are appreciated.

XIV.—CO-OPERATION OF TEACHERS.

The work of school medical inspection could not be carried out with any degree of efficiency without the co-operation of the teachers and I am indebted to them for their unfailing interest and willingness to assist in all matters relating to the health of their scholars ; I take this opportunity of thanking them.

At the inspections the teachers render valuable assistance by arranging for the children to present themselves in an orderly fashion and seeing that each child is ready for the medical inspection with a minimum of delay.

In the smaller schools the unavoidable disturbance of the school routine which a medical inspection entails is minimised by the co-operation of the teachers, which also facilitates the work of the medical officer in his examination and diagnosis. The modern schools are more fortunately placed, being provided with medical inspection rooms and waiting accommodation for parents.

XV.—CO-OPERATION OF SCHOOL ATTENDANCE OFFICERS.

A collateral and important branch of work in connection with education is carried out by the school attendance officers who, of necessity, work in close collaboration with the school medical department where the welfare of the school child is concerned. Mutual assistance is rendered by these two departments and frequently cases of mental or physical defect are referred to the medical officers by the school attendance department.

Medical certificates are issued by the school doctor when required for school attendance purposes.

The school attendance department undertakes the responsibility of placing physically and mentally defective children in appropriate institutions. Any children in need of escort are looked after by the school nurses.

XVI.—CO-OPERATION OF VOLUNTARY BODIES.

As the work of a local authority in medical treatment is limited by statute, reliance is placed on the help of voluntary agencies to supplement official schemes and valuable assistance is rendered by them each year.

Unfortunately a number of cases of child neglect and unnecessary suffering through lack of urgent treatment still occur every year and although every effort is made by the school medical staff to secure improvement without recourse to more drastic action it is inevitable that the valuable co-operation of the N.S.P.C.C. is required to deal with the worst offenders. I very much appreciate the untiring energy and perennial willingness displayed by the officers of this society in dealing with any case referred to them no matter how involved or complicated it may be.

Another voluntary body which is undertaking an increasing amount of valuable work in this county, and to which I am very much indebted for assistance during the year, is the recently formed Leicestershire Voluntary Association for Cripples' Welfare, a branch of the Central Council for the Care of Cripples. A special "Case Committee" has been formed which includes representatives from the school medical and public assistance departments. This committee

met on 23 occasions during the year and 298 cases were considered. Three district committees at Coalville, Blaby and Market Harborough are affiliated to the central body. There are 688 cases on the register of this association, 177 of these being children of school age. Over 620 of these cases were visited during the year by the officers of the association.

Valuable work has also been undertaken by these officers in convincing parents that treatment is necessary in cases where difficulty has been experienced by the school medical department in persuading them to attend the clinics with their children. Another aspect of the activities of this voluntary association is the finding of work for cripples that have left school, a problem that is entirely outside the sphere of the local authority.

Other voluntary agencies to which the department is indebted include the Loughborough Cripples' Guild, the Voluntary Association for Mental Welfare and the Leicester Saturday Hospital Society.

I am greatly indebted also to the staffs of the Leicester Royal Infirmary, the Loughborough General Hospital, the Melton Mowbray War Memorial Hospital, the Market Harborough and District Hospital and the Cottage Hospitals at Hinckley and Lutterworth for their assistance with cases of crippling defects and their efficient work under the county scheme for operative treatment of enlarged tonsils and adenoids.

XVII.—SUPPLY OF MILK AND PROVISION OF MEALS TO ELEMENTARY SCHOOL CHILDREN.

(*a*) *Supply of Milk.*

The supply of milk to the children attending secondary and elementary schools in the county has been continued.

These arrangements are made by the Agricultural Committee, the contracts being subject to the approval of the school medical officer. The producer must comply with the requirements at present in force in the county for the production and distribution of "accredited" milk.

Samples are collected at regular intervals from each supplier and examined bacteriologically at the county laboratory. The

producer is warned in each case where the sample of milk does not conform to the standard required by the committee. Every effort is made to assist the farmer to produce a satisfactory milk as regards cleanliness and the services of the county sanitary inspectors are always available in an advisory capacity. If, however, after repeated warnings no improvement is forthcoming the agricultural department is instructed to cancel the supply.

During the year it was necessary to terminate several contracts but in each case it was only after every effort had been made to assist the person concerned in procuring a satisfactory and clean milk.

Except for samples taken from pasteurised supplies, all milk is examined by the methylene blue test.

The number of samples collected was 540 and the results of the examinations were as follows :—

Satisfactory in both tests	344	(63.7%)
Not satisfactory in both tests	12	(2.2%)
Not satisfactory in methylene blue test	24	(4.4%)
Not satisfactory in coliform test	20	(3.7%)
Pasteurised (plate count)	140	(25.8%)

All the samples of pasteurised milk were found to be satisfactory.

The milk supply is either pasteurised or of accredited standard. The majority of the latter is obtained from licensed producers and it is only in areas where difficulty is experienced in obtaining supplies that milk is obtained from unlicensed producers. The amount of pasteurised milk has again slightly increased during the year.

Some difficulty is still encountered in obtaining supplies of milk for children in the more rural schools but this is being overcome as far as possible by transporting milk from other areas.

Although it was decided last year to supply loose milk to children attending small schools, this was not encouraged and at the present time all supplies are bottled.

The following returns show the amount of milk supplied to the schools during the past six years.

	1933	1934	1935	1936	1937	1938
No. of schools receiving milk	179	201	209	211	237	238
No. of children receiving milk	6,600	18,503	14,058	13,672	15,169	16,450
No. of bottles supplied weekly	33,250	90,261	68,976	67,927	84,183	85,425
No. of gallons supplied weekly	1,385	3,761	2,873	2,829	3,507	3,559

It will be noticed that the number of children taking milk has again increased but this is undoubtedly due to the fact that 1,424 children are receiving free milk this year as compared with 994 last year. These children are all examined by the medical officers and certified as requiring extra nourishment before a free ration is sanctioned.

In special cases where malnutrition is in evidence the children are supplied with an extra ration of milk on the recommendation of a medical officer. The children receive one bottle of milk during the morning break and one in the afternoon, and the number of children receiving this extra supply during the year was 51.

As was mentioned last year it has not been possible to re-examine all these children during the year but it is hoped that this will be possible during 1939. Head teachers are being requested to bring forward all children having this free supply at the next visit of a medical officer in the new year.

(*b*) *Provision of Meals.*

The whole of the arrangements with regard to the provision of meals is undertaken by the staff of the domestic science department of the Education Committee.

Free meals are provided in necessitous cases and children found on medical examination to require extra nourishment are referred by the medical officers to the appropriate department.

Menus are compiled by the domestic science teachers in the schools concerned under the supervision of the superintendent of domestic subjects. Specimen menus are submitted from time to time to the school medical department for their information and criticism.

Statistical particulars are not available, but it is hoped that next year it will be possible to include in this report information as to the number of schools in which meals are provided and particulars of the number of children obtaining such meals.

XVIII.—HEALTH EDUCATION.

The work in connection with health education, carried out in conjunction with the Leicestershire Insurance Committee, has been maintained during the year. The provision of health posters for instructional purposes has been found of value by the teachers. In addition to the usual observance of National Health Week at the beginning of October when health talks were given by teachers at the schools a number of films for school children were shown at cinemas in the following districts :—Birstall, Coalville, Destord, Earl Shilton, Hinckley, Ibstock, Loughborough, Market Harborough, Melton Mowbray, Oadby, Shepshed and South Wigston, and were a great success.

These arrangements were made by the Leicestershire Insurance Committee in conjunction with the County Education Committee and the Loughborough Education Committee and the following films were screened :—

Practice makes Perfect (Dental Hygiene)	15 minutes
Giro and His Enemies	13 ,,
Milk Production and Distribution	17 ,,
Daisy Bell Comes to Town	11 ,,
	56 ,,

Each child on leaving the cinema was given a copy of pamphlets issued by the Health and Cleanliness Council—"Help Yourself to Health and Beauty" and "Sparks for Lads."

XIX.—PHYSICAL TRAINING.

Report of the Organisers of Physical Education.

1.—*General.*

The past year is one of particular moment to those interested in physical education. The special emphasis which has been given to all aspects of physical education by the Government through the

National Fitness Council, the widespread activities of the Central Council of Recreative Physical Training, and of the National Playing Fields Association, have created new zest and enthusiasm, and have encouraged the extension and development of physical training and recreational activity in the various types of schools and educational institutions in the county.

If the national campaign for physical fitness is to command enduring success, it must be based upon the work accomplished in the schools. Moreover, it is fundamental that the training in the schools should cultivate not only good physique and the will to acquire suppleness and strength, but also the desire to attain and retain physical fitness. The training must fit the child for leisure, for play and for recreation, as well as for work.

2.—*Training of Teachers.*

Whether or not physical education in the schools is successfully to fulfil its purpose depends primarily upon the efficiency of the teachers. In its turn that efficiency depends, to a large extent, upon the facilities for training which are available. The rapid changes which have taken place during the last few years in the methods and scope of physical education make it the more necessary that the knowledge of teachers should be refreshed and supplemented from time to time by attendance at courses. It must be remembered that, in the majority of schools, specialist teachers of physical training are not available, and the subject has to be dealt with by teachers who are also responsible for the other subjects of the curriculum. More is now expected of children of any given age in the academic subjects, and there is on this account a tendency to concentrate upon those branches of the school curriculum which can be measured by an objective standard ; unless the teacher is convinced that physical education, properly conducted and developed along sound lines, is of great assistance in securing the very results he is elsewhere striving to achieve, the true value of the training will be lost. The organisers have therefore felt it their most important duty to convince the teachers of the general, as well as the specific value of physical training.

To this end they have continued to pay special attention to classes for teachers in the various types of school. It will be seen from the list of classes which is given at the end of this section that every endeavour has been made to minimise the inconvenience which may be caused to teachers. and to reduce the difficulties of travelling by

holding the classes in as many centres in the county as possible, and confining them to the larger centres of population. The classes held during the year have been highly satisfactory ; the attendance has been good, and reflects the great interest of those who have sacrificed leisure time in order to attend. The organisers feel, however, that the success of the classes, however gratifying, is not complete, since there remains a considerable body of teachers who, though responsible for physical training in the schools, have not attended any class for various reasons. Some of them are otherwise engaged in the evening, for example, in evening institutes, while others are more deeply interested in other aspects of school work to which they have devoted their leisure time. The organisers are strongly of the opinion that refresher courses for teachers cannot have their full effect so long as attendance at them is voluntary and they are held out of school hours. They recommend, therefore, that classes be held during school hours, and they feel that the advantages of intensive courses of this kind, attended by all the teachers responsible for the subject, would outweigh any inconvenience that might be caused by the temporary absence of teachers from their school duties. The following is a list of the classes for teachers that have been held during the year :—

Physical Training.

Centre	Date	Total No. of Class Hours	No. on Roll		Total
			Men	Women	
Leicester, Hazel Street	2.2.38— 6.4.38	15	—	80	80
Coalville Bridge Road Modern	9.5.38—25.7.38	15	—	40	40
Leicester, Collegiate Girls	11.5.38—25.7.38	15	—	55	55
Loughborough, Limehurst Girls	12.5.38—19.7.38	15	—	27	27
Loughborough, Limehurst Girls	12.5.38—19.7.38	15	—	56	56
Donisthorpe Cl.	16.5.38— 4.7.38	6	7	19	26
Lutterworth Mod.	17.5.38—28.6.38	6	—	19	19
Castle Donington Modern	17.5.38—28.6.38	6	—	11	11
Waltham-on-the Wolds	19.5.38—30.6.38	6	—	15	15

Physical Training—continued.

Centre	Date	Total No. of Class Hours	No. on Roll		Total
			Men	Women	
Stathern Cl.	19.5.38—30.6.38	6	2	10	12
Market Bosworth Modern	24.5.38—28.6.38	6	4	26	30
Leicester, Mantle Road	24.8.38—16.12.38	18	18	—	18
Leicester, Hazel Street	20.8.38—13.12.38	22½	21	—	21
Heathfield Mod.	20.9.38—29.11.38	15	—	15	15
,, ,,	19.9.38—28.11.38	15	—	61	61
Swimming.					
Hinckley Baths	7.3.38—11.4.38	6	—	34	34
,, ,,	17.3.38— 5.5.38	6	20	—	20
			72	468	540

One man and one woman teacher have attended term courses at Training Colleges during the autumn term, and one man is at present taking a year's course at Loughborough College.

3.—*Scope of Work in the Schools.*

Some aspects for consideration :—

(i) *Posture.*

(*a*) Most children on entering school at the age of 4 or 5 have a naturally correct posture, and if they were to live unrestricted natural lives, the majority would not need postural or corrective exercises. Since, however, so much time is spent in sitting badly, carrying heavy loads, and wearing ill-fitting shoes and clothing, their growing bodies need definite exercises of a corrective type to counteract the ill effects of some of their daily habits.

An infant lesson should contain plenty of activity, large free active movements employing the whole class, combined with simple suppling and corrective exercises and definite training from the beginning in obedience and quick response. There should also be free use of balls, ropes, hoops, and other simple apparatus, in order that the children may acquire skill and develop courage.

As an ideal there should be two daily lessons of 15 to 20 minutes each, one in the morning and one in the afternoon. At present, very few schools have reached this ideal. All have a minimum of one lesson each day, and it is pleasing to record that an increasing number of schools now give secondary lessons on two or three afternoons of the week.

Infant teachers have a great responsibility ; they lay the foundation which is indispensable if children are to enjoy the work and to make progress during and after their school life.

(*b*) In the junior school much more definite training in posture is introduced. The lessons are more formal and the movements require more precision , greater accuracy, speed, and initiative should be expected from the children. The group work is the climax and peak of the lesson, and for the children the most enjoyable part, and should never be omitted. There they can put into practice by themselves all that they have been taught, and receive an opportunity to show initiative, leadership, and co-operation, and also that they are able to make conscious effort to obtain good posture, so that it eventually becomes a habit.

(*a*) If, up to the age of 11+, the child has been trained to have some idea of good posture, there will be much less likelihood of children in senior schools developing the poking head and rounded shoulders so often seen in adolescents. Good posture cannot be attained and maintained by the physical training lesson alone. It is a matter in which the co-operation of every teacher is needed. Good posture means not only a correct position in standing and sitting, but also correct carriage in every movement—walking, running, and jumping. Moreover, it should not be confined to the school ; it should be carried into the playground, the street, and the home.

If the training from the infants' school upwards has been continuous and thorough, the children themselves will take a pride in their physical well-being and will realise that good posture does not begin and end with the physical training lesson.

(ii) *The Importance of Good Footwork.*

Particular effort has been directed to the improvement of footwork during the past year. It is one of the most important aspects of the physical training lesson and needs to be tackled strenuously by all teachers. It is not sufficient that the children should change into

rubber slippers, though this is essential if the work is to be performed properly ; having changed their shoes the children must be taught to *use* their feet.

The foot should not be kept rigid and flat ; the many bones and joints of which it consists should all be used. Marking time, running, skipping, and jumping are too often performed on the flat foot instead of on the ball of the foot. If attention is given to correct footwork from the start, movements will be much lighter, more springy, and the children more agile, quicker, and sure-footed. In addition the children will have a correct base upon which to build correct posture.

(iii) *Clothing.*

Many more schools have acquired slippers, vests and shorts for physical training during the past year, but there are still many where the children are not yet suitably clad for physical training. It is generally recognised that the value of physical training is greatly enhanced by the wearing of proper clothes and by a rub down or a shower at the end of the lesson. Where, however, no special costume is worn, the garment next to the skin should be discarded so that it is dry to be put on after exercise. If this is impossible, the children should acquire the habit of discarding all outer clothing, so that they are unhampered and free from constriction. Tight and clinging garments and heavy boots will most certainly hamper and prevent the proper execution of many of the most valuable exercises in the syllabus, and children thus handicapped will tend to develop bad methods which will be slovenly or even injurious.

(iv) *The Weather.*

During the past year the weather has been very favourable for outdoor work, and few lessons should have been missed. In this connection, it is essential that the children should be trained to be hardy and not afraid of inclement weather. With so much activity in every lesson of the syllabus, the children can be kept warm and invigorated, so that they can experience a feeling of exhilaration and well-being. These outdoor lessons should create a love of fresh air and encourage the children in healthy outdoor pursuits.

(v) *Broadcast Physical Training Lessons.*

The lessons broadcast by the B.B.C. have been taken by a few schools as an experiment and have been observed by the organisers.

There is no doubt that these lessons are of very little value to teachers experienced in the teaching of physical training.

The following observations may prove helpful.

(*a*) Something can be made of these lessons by a teacher who has previously learned and prepared the lesson herself, so that she knows what is coming and can help the children by demonstration at the right moment, but this is only a poor substitute for a lesson by the teacher herself. The wireless lesson is completely valueless unless previously prepared by the teacher.

(*b*) There is too much standing still. The instructions take too long and have not that force and clearness that the teacher can give through her own personality, and by her own demonstration ; while listening to these lengthy instructions the children tend to stand badly.

(*c*) There is no coaching and very little correction, neither is it possible to repeat movements done badly or wrongly. Unless the whole instruction is grasped by the class, the exercise is a failure, as it cannot be stopped and restarted.

(*d*) There is no Group Work.

(*e*) Generally speaking, there is a lack of activity and continuity. The children do not get the personal touch which is so valuable and which, coming from an energetic and live teacher, does so much towards making the children enthusiastic and willing workers, and so producing between them a valuable and successful lesson.

4.—*Organised Games and other Physical Activities.*

No system of physical education is complete that does not include games, dancing, athletics and swimming. It is hoped that teachers will realise that the exercises of the physical training syllabus, however thoroughly performed, are a part only of their schemes of physical education.

(*a*) *Games.*

In most junior schools greater attention should be given to the games lesson and its planning. Children up to the age of 11 years are capable of much more than is at present expected from them. It is not sufficient merely to play a game or a number of games. There should be coaching in correct ball handling, tactics and co-

operation in every lesson. To attain this the teachers should have an understanding of the underlying principles of games.

It is suggested that a graded scheme of work, to cover the games lessons, be compiled for both the winter and summer seasons. In addition, junior schools should adopt a major game for summer and one for winter. A definite objective would thus be provided, and the children should be expected to play these games with reasonable skill before going on to the senior school.

In the senior schools the majority of the national games are played during the period set apart for organised games. Most of the senior schools now possess playing fields or have access to recreation grounds or fields rented for this purpose. It is pleasing to note that opportunities for playing games on the playing fields for girls are increasing. There has been a tendency, which persists in some cases, to confine the use of the playing field to boys. Since the large amount of space required for football invariably occupies the centre of the field, there remains very little room for the major games for girls, such as hockey and shinty. In order that equal facilities should be enjoyed by boys and girls, it is suggested that when the playing field is not of adequate size to permit the playing of games for both sexes at the same time, different periods should be allocated to the classes. If the organisation of the school does not permit this, other major games should be taken which would permit playing space for all.

The main object of the organised games lesson is not to play a game or games, or to play one team against another in order that one may claim the victory. It has still to be realised by many teachers in charge of games that the playing field is an open-air classroom and that training is just as necessary outside as inside the school. Definite tuition is needed in order that all the children may be taught how to play in the best way.

It is felt that if more attention were paid to the finer points of the major game, through the use of the various minor games and practices, not only would the standard of play become considerably

higher, but the personal skill acquired by each player would create an incentive to play better and harder.

To summarise—the playing of major games in the organised games period should always be preceded by the playing of a number of minor games or practices, in which some points of skill, tactics, or co-operation should be taught and demonstrated by the teacher ; a reasonable time should be allowed for actual practice by the children.

(*b*) *Athletics.*

This branch of physical education does not receive its full share of the time set apart for out-of-school activities. There is, however, evidence of the growth of a greater interest in athletics in the schools, and it is hoped that in the near future athletics and of training for athletic events will be taken periodically, along with the more favoured games of football, cricket, hockey and netball.

The majority of the senior schools hold an annual sports day but in only a few schools is training given for the events. The school sports day should be the culmination of the year's training of all pupils, and not an isolated social event.

(*c*) *Swimming.*

Swimming instruction has, of necessity, been confined to those schools within easy reach of the baths. Through the courtesy of the baths' committees, it has been possible to arrange for 139 classes of senior boys and girls to attend the 10 swimming baths in and out of the county.

The organisers wish to emphasise the fact that the instruction is carried out by the teachers who have attended the courses in swimming instruction arranged by the authority. It is pleasing to note that the class method of instruction has taken the place of the individual method, and, as a result, more uniform progress has been made.

The swimming tests now form a definite part of the scheme of instruction and have been the means of raising the standard of swimming.

The details of attendances and attainments are given in the following tables :—

Swimming Baths	No. of Classes. *Boys.*	*Girls*	Total No. ot Attendances. *Boys*	*Girls.*
Oadby	8	6	1,673	1,341
Hinckley	11	12	4,798	4,103
Coalville	14	12	4,687	4,187
Loughborough	5	4	1,525	1,523
Market Harborough	7	7	2,426	2,284
Leicester	12	9	6,313	1,966
Ashby-de-la-Zouch	2	—	451	—
Melton Mowbray	12	14	1,073	1,078
Long Eaton	1	1	34	16
Swadlincote	1	1	26	18
	73	66	23,006	16,516

Total No. of Classes .... = 139
,, ,, ,, Attendances .... = 39,522
Total No. of boys who attended Baths .... = 2,280
,, ,, ,, girls ,, ,, ,, ... = 1,672

No. attending Baths	Non-Swimmers	Swimmers not Graded	Grades 1	2	3	4	Life Saving Awards Elem.	Inter.	Bronze
Girls 1,672	904	258	285	128	54	34	2	6	1
Boys 2,280	1,163	315	317	254	120	42	24	45	—

No. of girls who have learned to swim .... = 768
,, ,, boys ,, ,, ,, ,, ,, ... = 1,117
Girls = 46%
Boys = 50%

(*d*) *Dancing.*

Dancing is confined at present to english country dancing in a few schools. It is hoped and suggested that other forms of dancing, such as 'national' and 'natural movement' will soon find a place in the school curriculum. There is no doubt whatever as to the value of these types of dancing in developing balance, poise, artistic movement, joy in motion, and self expression. Where there is a hall there should be little difficulty in introducing a regular period of dancing into the physical education syllabus. Even without a hall something could be done in a small cleared space. The benefits to the children, both physically and mentally, are obvious to those who have had experience in this branch of physical education.

5.— *Apparatus.*

The benefits and the enjoyment of the new syllabus have been greatly enhanced by the provision by the committee of apparatus for use during the physical training lesson. The supply has been greatly appreciated by both pupils and teachers. It is pleasing to note that the committee have again provided in their estimates for the coming year for the further supply of apparatus.

6.—*Out of School Activities.*

The ever increasing work by the schools' voluntary clubs and associations is deserving of the highest praise. The teachers who give of their leisure time to the advancement of out of school activities for the benefit of the children should receive every encouragement and support. Inter-house, inter-school, and inter-area contests in football, cricket, athletics, swimming, hockey and netball have been organised, and each association is self-supporting.

Representatives from the Leicestershire schools athletic association took part in the national schools athletic sports held at Derby in July. Although the Leicestershire competitors were beaten in all the flat events, a second place in the 'long jump' was secured by a county girl.

It is hoped that the association will have more successful candidates at the forthcoming national sports, which are to be held at the Stadium, Loughborough College, in July, 1939.

7.—*Secondary Schools.*

Great improvement has been made during the past year in the conditions for carrying out an advanced scheme of physical education

suitable for children in secondary schools. All the 14 schools now have fully equipped gymnasia, 5 of which have been built during the year. The majority of these gymnasia are equipped with changing rooms and showers.

At the present time the instruction in 6 schools is in the hands of visiting teachers. In others the work is done by a member of the staff.

The arrangements for visiting teachers present considerable difficulty. Since in most of the schools forms are mixed, the heads prefer, in order to simplify the time-table, which is already complicated by the restriction of physical training to a certain day or days, that the man and the woman teacher should visit at the same time. Consequently, the gymnasium can be used only in turns, the other section working out of doors. It is obvious that the scheme of work can be fully carried out only in favourable weather. Moreover, the scope of the work is limited, and the special qualifications of the teacher cannot be fully used, owing to the fact that the time of the visit is fully occupied by gymnastics, and none is left for games, athletics and dancing. The organisers are of opinion that the only solution of this problem is the appointment in each school of a fully qualified teacher, even though he or she may not be employed full-time in physical education. The arrangement of the time-table would be simplified, the work would be spread over the week, and, more important still, the teacher would feel a deeper interest in the individual pupils and their activities, in and out of school, than can be expected of the most enthusiastic teacher who has to visit three or four schools.

The organisers welcome the conclusion of the Consultative Committee of the Board of Education in their recent report on secondary education that "physical education should receive greater emphasis in the curriculum and a larger share in the time-table." They sincerely hope that it will have the earnest consideration of the heads of secondary schools.

8.—*Provision of Physical Education for those who have left School.*

The Committee have continued their policy of encouraging the development of physical education for those who have left school. A number of new classes have been started, but unfortunately, some that were in existence last year have failed. In spite of this, the number of classes has increased from 60 to 73.

The recreational physical training classes for youths and men, six in number, held in different parts of the county and primarily formed with the object of providing training centres for students attending Loughborough College, have proved very successful. The classes were well attended, and the work thoroughly enjoyed. Six additional classes have been formed in the rural parts of the county.

In addition, 'keep fit' classes have been started at four women's institutes, and at one factory, and each has been supplied with a suitable leader.

The classes are of 1 or 1½ hours duration. In some cases, portable apparatus is used, while at others 'keep fit' exercises with music, recreational physical training and dancing are taken.

It is unfortunate that many of these classes are held under difficult conditions, the chief of which is the lack of suitable floor space. Some classes are held in an inadequate cleared space in a school, desks, chairs, etc. being piled up all round. If the general public are to be attracted to these classes, not only must there be leaders who can direct the right type of work, but also suitable premises in which to carry out the work. There is also a great need for a capable pianist for each 'keep fit' class.

The Training of Leaders for Recreational, Physical Training and 'Keep Fit' work.

The problem of continuing physical education for those who have left school and for older people is a pressing one, and the essential point at the moment is the training of leaders for this work.

The success or otherwise of these post-school classes lies entirely with the leaders. To be a successful leader, it is necessary firstly to do the work for the love of it (that does not mean it is to be unpaid work); secondly, to be sociably inclined and a good mixer; thirdly, as the name implies, to have the qualities of leadership. These qualities are of first importance: technical knowledge can be gained later. The method of approach and method of presentation of work are very different from those of a teacher with a class of children, and it is when the leader does not realise this that classes fail.

Preliminary short courses for men and women leaders were held during the summer and autumn and were attended by 19 men and 52 women. It is hoped to hold similar courses from time to time.

Meanwhile the work is going on. New classes for the general public are continually being formed in various parts of the county. It is hoped that all those who are interested in recreational physical training and 'keep fit' work will take advantage of the classes of instruction for leaders, and so increase their knowledge and experience of this type of work, in order that the classes for the general public in this county may be successful.

Voluntary Organisations.

A new venture during the year was the formation of a club for women interested in any aspect of physical education. The club, which is called the Leicestershire Women's Physical Training and Recreative Club, opened in September. It meets at the Collegiate Secondary School, Leicester, on alternate Wednesdays from 6.0 to 8.0 p.m. The object of the club is to further the cause of physical fitness amongst girls and women, and it forms a meeting place for the dissemination of ideas and for discussion of methods. All branches of practical work are taken, in addition to talks and demonstrations.

12*th January*, 1939.

M. D. O. EVANS,
D. D. MILLER.
Organisers of Physical Education.

XX.—BLIND, DEAF, DEFECTIVE AND EPILEPTIC CHILDREN.

(1) *Physically Defective Children.*

An up-to-date register is kept of the names of all physically defective children, additional names of children discovered at routine and special examinations by the medical officers being added from time to time. A number of these children suffer from physical defects of such a nature as to interfere with their ordinary activities at school and home visits by the medical officers are necessary to new cases or for following up purposes.

The register contains a fairly complete record of all physically defective children in the county and is of value in ascertaining the progress of any child registered.

The cases are classified as follows :—

	Males	Females	Total
Blind or partially blind	13	11	24
Deaf or partially deaf	8	10	18
Anterior poliomyelitis	33	31	64
Spastic paraplegia	11	7	18
Congenital deformities	10	9	19
Torticollis	4	3	7
Rickets	5	1	6
Scoliosis	4	6	10
Osteomyelitis	4	3	7
Muscular dystrophy	7	2	9
Heart disease	7	19	26
Talipes	23	7	30
Birth palsy	8	4	12
Injuries	9	2	11
Miscellaneous	8	11	19
Von Perthes disease	4	1	5
Spina bifida	3	—	3
	—	—	—
TOTALS	161	127	288
	—	—	—

(2) *Tuberculosis.*

A card index system of recording at the central office, Leicester, contains all cases of school children suffering from tuberculosis notified by the school medical officers, tuberculosis officers and general practitioners. New cases and those reported by the school nurses as a result of their visits to the homes of the children are added from time to time.

The assistant school medical officers, during the course of their routine school work, examine contacts of tubercular cases.

(3) *Mentally Defective Children.*

(*a*) *Ascertainment.*

The main sources of notification of mentally defective and mentally retarded children are the school teachers, organisers of special classes, school attendance officers and school nurses.

In addition a certain proportion of the school medical officers' time is allotted to the examination and re-examination of mentally

defective and mentally retarded children, in many cases home visits being made.

Complete particulars of each mentally defective child are registered at the central office, additions and deletions being made as and when necessary. Re-examinations are carried out as frequently as possible though the length of time required for this type of examination does not permit as frequent re-examination as might be desirable.

(*b*) *Provision for the Mentally Retarded.*

Most of the mentally retarded children in the county are now provided for, those at modern and senior schools attending special classes, each class consisting of from twenty to twenty-five children ; while at the primary schools mentally retarded children are dealt with individually by the organisers. The teachers in charge of these classes have special knowledge of the work of teaching mentally retarded children having attended courses arranged by the Central Association for Mental Welfare.

Two whole-time organisers are employed by the County Council, one being in charge of the children attending junior schools, and the other supervising the work of the special classes.

The work at the special classes continues to progress satisfactorily but the provision of further classes has been delayed owing to lack of staff and accommodation. In the junior schools, where no special classes are held, the organiser periodically tests the children and advises on suitable individual work and methods of instruction.

The intelligence quotient of each child is determined by a school medical officer and an annual assessment of the educational ratio is made by the organiser, detailed records being kept of each mentally retarded child.

(*c*) *Provision for the Mentally Defective.*

Mentally defective children classified as feeble-minded (ineducable), imbeciles and idiots are notified to the Mental Deficiency Act Committee and dealt with under the Mental Deficiency Acts. Provision for the care of mental defectives is made at Stretton Hall, near Leicester, which is administered by this committee.

(d) The Work of the Voluntary Association for Mental Welfare.

Of the fifty-seven names added to the register of the Voluntary Association during 1938, twenty-one (9 male and 12 female) were those of children between 7 and 16 years of age—as compared with twenty-five referred in the previous year.

Two names (1 male and 1 female) were subsequently removed from the register, as the children were found not to be mentally deficient, the boy in this case being sent to an approved school.

Of the remaining 19 children, one was in regular work at the end of the year : three were attending elementary schools : one had been admitted to a residential special school and two were awaiting similar vacancies : one had joined an occupation centre and one was receiving individual training from the Association's home teacher : the other nine "ineducable" children had been placed under statutory supervision and one "educable," physically defective child was under voluntary supervision.

The Association has, as in previous years, been glad to assist, when desired, by providing escorts for children admitted to residential special schools or returning home on holiday. Friendly contact has been maintained with those children who have left special schools and certain ex-approved school children.

The occupation centres at Loughborough, Hinckley and Coalville, and also the home training at Melton Mowbray, all continue to be a source of help, interest and happiness to the defectives attending and are much appreciated by the parents. At one centre three children made 100 per cent. attendances during the year. The average attendances all round were satisfactory, but the number on the register remains small and newcomers would be most welcome, particularly at Coalville. We are glad to record that a boy formerly attending here for a number of years has now improved sufficiently to secure and retain regular, full-time employment and two others are in part-time work. It is surprising to note that at this small centre not one child lives in the town itself.

We wish to record our grateful thanks to the local education authorities for the financial help granted to the Association : to the school attendance and school medical departments for their co-operation, and particularly with regard to the annual medical inspections held at the centres.

(4) *Psychological Cases.*

All county children admitted to the Leicester City remand homes are examined upon admission by one of the assistant school medical officers in order to ensure that they are free from infectious or contagious disease. Any case which is transferred to an institution or special school is again examined, and a certificate issued as to his physical and mental condition.

When a school child appears before the magistrates and there is doubt about his mental or psychological condition, he is placed in the remand home for a period of observation by one of the assistant school medical officers. He is seen at frequent intervals, and a full report prepared, which is often of great assistance to the magistrates in coming to a decision as to the action to be taken.

A certain number of "problem children" are referred to the department by school teachers, parents or private medical practitioners. Some of the more difficult cases are referred to a psychologist, but the majority are investigated and treated by members of the county staff.

The following is a statement of the cases seen at the remand homes and elsewhere during 1938 :—

(*a*) *Remand Home Cases.*

Boys	27
Girls	4

Disposal :

Sent to approved schools : 22 boys ; 3 girls.

Certified as mentally defective and admitted to Stretton Hall: 2 boys.

One placed on probation for 12 months. (Assault case).

One released on bail, case dismissed later.

Two transferred to other authorities (Derby and Glasgow).

(*b*) *Referred by Teachers and Parents.*

Twelve children presenting psychological problems were seen by request during the year. One child was referred to the city psychologist. Several were kept under prolonged observation and were still undergoing treatment at the end of the year.

XXI.—SECONDARY SCHOOLS.

(1) *Medical Inspection.*

The number of secondary schools remains the same as last year, namely 14. Seven of these are maintained by the authority and seven are non-provided but aided.

The approximate number of children on the rolls of the provided schools is 1,565 and in the aided schools 2,006, a total of 3,571.

Routine medical inspections are carried out each year by the medical officers together with the re-inspection of children previously referred for treatment. All specials are examined at the same time. A lady medical officer undertakes the examination of all the girls.

Parents are notified when a child is found to require treatment and are advised to consult their own doctor. No following up is undertaken by the staff of this department.

The number of routine inspections was 1,426 as compared with 1,539 last year. The number of children requiring treatment was 266 or 18.6 per cent.

The most prevalent defects were defective vision, flat feet and enlarged tonsils.

(2) *Medical Treatment.*

No treatment is provided by the authority, but it is anticipated that in the very near future some provision will have to be made for the treatment of free place scholars.

XXII.—EMPLOYMENT OF CHILDREN AND YOUNG PERSONS.

Bye-laws control the engagement of young persons in street trading and do not permit the employment of children before school hours except for the delivery of milk and newspapers and a certain class of domestic work. Thus it is ensured that the fitness of the child to receive education is not affected.

Before application can be made for an employment certificate each child is required to pass a medical examination by a school medical officer and attends one of the school clinics for this purpose.

During the year, 195 certificates were granted :—

Errands	49
Delivery of Newspapers	133
Delivery of milk	6
Other permitted duties	7

Any child, who, by reason of an abnormal physical or mental condition is considered unfit to undertake certain forms of employment, is notified to the Juvenile Employment Exchange. A record of these cases is kept and the children are re-examined periodically; the certificate being forwarded to the employment authorities when the child leaves school.

XXIII.—HYGIENIC CONDITIONS OF ELEMENTARY SCHOOLS.

A survey of the hygienic condition of the elementary schools in the county was again carried out, 1938 being the seventh year during which the scheme has been in operation. The assistant school medical officers take the opportunity, when visiting schools for routine medical inspection, of discussing with the head teacher any matters relating to the school building of which complaint is made, and also make a general survey of the school premises. A report, on a special form, is made upon every school which is visited during the year.

The form of report commences with a statement of the average attendance, and the type of surroundings of the school. Details are entered under the following main headings :—

Heating ; type and adequacy.
Ventilation.
Lighting, both natural and artificial.
Water supply.
Washing accommodation.
Sanitary arrangements.
Cloakroom accommodation.
Playground.
General cleanliness.
Desks and blackboards.
General remarks.

The reports are examined by the senior assistant school medical officer, and, if necessary, defects are referred to the Building and

Sites Department, who take steps to remedy them. Certain minor defects are held over, either on account of their trivial nature, or because it is known that the provision of a new school is being considered.

There is no doubt that this system has been of great benefit in bringing to the notice of the appropriate department instances of disrepair and delapidation in the earlier stages. It is obviously helpful to all concerned that any complaint from the teacher should come to the department with the backing of a disinterested third party ; it promotes the remedying of serious defects, and prevents the department being hindered by the investigation of petty complaints.

The following is a list of defects recorded by the assistant school medical officers, and referred to the Building and Sites Department, during 1938 :—

	Church Schools.	Council Schools.	Total
No. of reports recording defects	40	24	64
Furniture—broken, insufficient or wrong type	18	9	27
Sanitary conveniences requiring alteration or repair	5	10	15
Playground, inadequacy or disrepair	10	4	14
General disrepair of buildings	8	3	11
Cloakroom accommodation inadequate	2	2	4
Water supply inadequate	3	1	4
Floors—disrepair	2	2	4
Insufficient lighting.	3	1	4
Washing accommodation inadequate	3	0	3
Infrequent emptying of closet receptacles	3	0	3
Heating inadequate	2	0	2
Dampness	2	0	2
Supply of drinking water insufficient	0	2	2
Leaking roofs	0	1	1
Partition in classroom required	1	0	1
Reports	40	24	64
Grand Total			
Defects	62	35	97

In addition to these, the following defects were recorded, but were not referred for action—generally on account of their trivial nature :—

	Church Schools.	Council Schools.	Total.
No. of reports recording defects	33	13	46
Defects of : School furniture	9	4	13
Playground	9	1	10
Heating	6	3	9
Cloakroom accommodation.	3	3	6
General repair	4	1	5
Washing accommodation	3	1	4
Sanitary conveniences	2	1	3
Accommodation for P.T.	0	3	3
Emptying of closet receptacles	2	0	2
Lighting	2	0	2
Water supply	1	0	1
Floors	1	0	1
Ventilation	1	0	1
Cleanliness	0	1	1
Reports	33	13	46
Grand Total	—	—	—
Defects	43	18	61
	—	—	—

The number of voluntary ("Church") schools in the county exceeds the number of council schools, in the proportion of about 3 : 2, but even taking this into account it will be noted that more complaints are recorded about the condition of voluntary than of council schools. Many church schools are old, and though solidly built and doubtless at one time considered hygienically satisfactory. they do not always conform to present day standards. On the whole, however, the survey shows a fairly satisfactory state of affairs. Few of the defects recorded above are really very serious, or likely to have much adverse effect upon the health of the children. Perhaps the most urgent matter recorded is the number of backless desks still to be found in certain schools. The disadvantages of these desks are obvious ; bad posture and fatigue are often directly attributable to their use. It is time they were completely eradicated. The only other defect likely to affect directly the health of the pupils concerns the cloakroom accommodation. In only ten reports was actual inadequacy of the cloakroom accommodation complained of, but in

very few cases indeed are any special facilities for drying clothing or shoes provided. About half of the schools in the county have some method of heating in cloakrooms—usually radiators or hot pipes ; but this is seldom sufficient to ensure the proper drying of outer clothing in bad weather. Considering the prevalence of rheumatism in its various forms in the school population of this county—to which attention was directed by the deputy school medical officer in last year's Annual Report—it would seem desirable that in future special attention should be directed to cloakroom accommodation.

The remainder of the defects set out above call for little comment. Worn and uneven playground surfaces sometimes lead to minor accidents ; this matter receives regular attention from the appropriate department. Defects in relation to sanitary arrangements, water supply, washing accommodation—these, as has been pointed out in previous reports, are chiefly important because they constitute a bad object lesson in personal hygiene. This is true ; but so long as the homes of rural children remain unprovided with a proper water supply the effect of any such object lesson, whether good or bad, must be comparatively slight.

One wonders what would have been the result of a survey such as this, with our present standards, in the schools of fifty years ago.

The following table summarises the repairs and improvements which have been carried out during the year :—

Installation of water supply	7
Playgrounds tarpaved and repaired	6
Electric light installations	5
Conversions of out-offices to water carriage system, and various repairs	4
Folding partitions in classrooms	6
Heating improvements	3

As in previous years, the medical staff have greatly appreciated the willing co-operation of teachers in the carrying out of this survey.

XXIV.—SPECIAL ARTICLES.

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(1) THE CAUSES OF DEATH AT SCHOOL AGE.

One of the most famous of the Aphorisms of Hippocrates states that "Consumption occurs chiefly between the ages of eighteen and thirty-five." For over two thousand years, therefore, it has been recognised that the connection between age and disease incidence is a matter of importance to the physician.

It occurred to me that it might be interesting to investigate the chief causes of death at school age in Leicestershire, over a period of years. Deaths among school children are, fortunately, not common ; in fact, the proportion of the total deaths occurring at this age is smaller than at any other period of life. But the death of a school child is tragic. It probably means more to the parents than the loss of an infant whose personality is yet unformed, or of an older child who is striking out into life and has begun to drift away from the home. Moreover, the school child has the fullest capacity for vigorous health, having passed the dangerous post-natal period, and being still far distant from the time of mental worries and physical degenerations. Disease, at such a time of life, should be avoidable if ever it can be avoided ; but in order to take precautions, we must appreciate the dangers.

In this article it is proposed to examine the mortality at school age during the last thirty-five years, paying particular attention to any change in trend ; to speculate upon the causes of any such change, and to discuss possible future developments. Routine medical inspection of school children was first undertaken in this county in 1909, so that this investigation should afford some indication of the success or otherwise of general supervision. Uninformed critics frequently allege that the school child of the last generation was "just as healthy" as the child of to-day. We shall see how much truth there is in this statement.

It is impossible to present the results of an investigation of this kind without having recourse to tables of statistics. Although these are included in this article, an attempt has been made to analyse them quite fully in the text—a special concession to the general reader.

The Principal Causes of Death.

The first table includes, for the sake of perspective, the pre-school child and the young adult, as well as the school child in whom we are primarily interested. The first part of the table concerns the ten year period 1903 to 1912, and the second the period 1928 to 1937. It therefore shows the changes which have taken place in a quarter of a century. Here we have the five chief causes of death in three age groups, with their death rates per thousand living *at these ages.** (Table I. overleaf).

The most striking thing revealed by this table is the remarkable reduction in the death rate from all causes, in each group. In the pre-school group it has been reduced by more than one-third ; in school children by more than one-quarter, and in young adults by about one-fifth. In the first period, there were four diseases—pneumonia, bronchitis, measles and non-respiratory tuberculosis, each killing off pre-school children at the rate of more than one out of every thousand, every year; now only pneumonia can claim such a record. Bronchitis, which accounted for 296 of these children in the first ten-year period, only claimed 29 in the last. Measles now occupies sixth, instead of third place, and its mortality has fallen to less than one quarter of what it was then. Whooping cough, though it still occupies fifth place, only claims half of its former annual toll. A similar reduction in death rate is seen in the case of diphtheria (0.37 per 1,000 instead of 0.81) but changes in the other diseases have brought it to fourth place instead of sixth.

Glancing at the mortality among young adults, we find phthisis occupying pride of place among destroyers. The age incidence of this disease is precisely the same to-day as it was in the time of Hippocrates. During the last thirty-five years it has accounted for about forty per cent. of the deaths in the young adult group ; but the death rate has fallen by one-fifth, proportionate to the general reduction in this age period. Tuberculosis in other forms, heart diseases, and pneumonia, have been reduced to about one half of their former rapacity ; alone among the principal causes of death, violence claims more victims at this age—nearly twice as many as it did a generation ago. We will return to this question in a moment.

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*The calculations were somewhat complicated, as only figures for total population were available. The proportion of the total formed by each age group has varied considerably since the beginning of the century; for example, the age group 5—14 years formed 21% of the total population in 1901 and only 15% in 1936. (Figures for England and Wales, League of Nations Statistical Year Book.)

TABLE I.—LEICESTERSHIRE, THEN AND NOW.

Chief Causes of Death in Children and Young Adults.

	Pre-School Child. Age 1—4 years	School Child. Age 5—14 years	Young Adult Age 15—24 years
	First Period 1903—1912.		
1st	PNEUMONIA 14.6% Death Rate 1.80	TUBERCULOSIS 15.0% (Non-Respiratory) Death Rate 0.36	PHTHISIS 39.7% Death Rate 1.24
2nd	BRONCHITIS 11.4% Death Rate 1.40	DIPHTHERIA 14.7% Death Rate 0.35	Tuberculosis 9.1% (Non-Respiratory) Death Rate 0.28
3rd	MEASLES 10.5% Death Rate 1.29	Phthisis 8.3% Death Rate 0.19	Heart Diseases 8.0% Death Rate 0.25
4th	TUBERCULOSIS 10.2% (Non-Respiratory) Death Rate 1.26	Heart Diseases 7.4% Death Rate 0.17	Pneumonia 5.0% Death Rate 0.16
5th	Whooping Cough 7.3% Death Rate 0.89	Violence 7.1% Death Rate 0.17	Violence 4.9% Death Rate 0.15
	of 2,593 deaths. Death Rate 12.27 per 1,000	of 1,164 deaths. Death Rate 2.38 per 1,000	of 1,395 deaths. Death Rate 3.12 per 1,000
	Second Period 1928—1937.		
1st	PNEUMONIA 21.9% Death Rate 1.22	DIPHTHERIA 12.1% Death Rate 0.21	PHTHISIS 39.2% Death Rate 0.97
2nd	Tuberculosis 10.9% (Non-Respiratory) Death Rate 0.61	Violence 10.9% Death Rate 0.19	Violence 11.6% Death Rate 0.29
3rd	Violence 10.2% Death Rate 0.56	Tuberculosis 7.9% (Non-Respiratory) Death Rate 0.14	Heart Diseases 5.7% Death Rate 0.14
4th	Diphtheria 6.7% Death Rate 0.37	Heart Diseases 5.9% Death Rate 0.10	Tuberculosis 5.5% (Non-Respiratory) Death Rate 0.14
5th	Whooping Cough 6.5% Death Rate 0.36	Pneumonia 5.6% Death Rate 0.10	Pneumonia 3.7% Death Rate 0.09
	of 975 deaths. Death Rate 5.57 per 1,000	of 820 deaths. Death Rate 1.71 per 1,000	of 1,264 deaths. Death Rate 2.48 per 1,000

Coming now to our principal subject, the school child, the next table (Table II) shows the progressive changes, at ten-year intervals, since 1903.

TABLE II.—CHIEF CAUSES OF DEATH AMONG SCHOOL CHILDREN.

	Pre-War 1903—1907	Early War Period 1913—1915	Post-War 1923—1927	Present Day 1933—1937
	Death Rate 2.37 per 1,000	Death Rate 2.49 per 1,000	Death Rate 1.81 per 1,000	Death Rate 1.55 per 1,000
1st	**TUBERCULOSIS** (Non-Respiratory) 15.7% Death Rate 0.37	**DIPHTHERIA** 13.9% Death Rate 0.35	TUBERCULOSIS (Non-Respiratory) 11.5% Death Rate 0.21	DIPHTHERIA 12.7% Death Rate 0.20
2nd	**DIPHTHERIA** 15.1% Death Rate 0.36	TUBERCULOSIS (Non-Respiratory) 11.0% Death Rate 0.28	DIPHTHERIA 11.0% Death Rate 0.20	VIOLENCE 11.9% Death Rate 0.19
3rd	PHTHISIS 9.2% Death Rate 0.22	PNEUMONIA 8.3% Death Rate 0.21	Violence 6.8% Death Rate 0.12	Tuberculosis (Non-Respiratory) 8.0% Death Rate 0.12
4th	HEART DISEASES 8.0% Death Rate 0.19	HEART DISEASES 7.8% Death Rate 0.19	Heart Diseases 6.2% Death Rate 0.11	Pneumonia 6.7% Death Rate 0.10
5th	Violence 6.3% Death Rate 0.15	Phthisis 7.5% Death Rate 0.18	Phthisis 5.3% Death Rate 0.10	(Phthisis) 5.5% Death Rate 0.09
6th	Pneumonia 5.2% Death Rate 0.12	Violence 7.2% Death Rate 0.18	(Pneumonia) 5.1% Death Rate 0.09	(Heart Diseases) 4.4% Death Rate 0.07
7th	Scarlet Fever 4.7% Death Rate 0.11	Appendicitis 4.8% Death Rate 0.12	(Appendicitis) 3.7% Death Rate 0.07	(Appendicitis) 4.4% Death Rate 0.07

N.B.—(1) Appendicitis not classified in Pre-War period.
(2) No figures available for 1916 and 1917.

With a temporary set-back during the war, this is the history of a progressive reduction in the death-rate from all causes, with the single exception of deaths from violence. The greatest reduction is seen in the case of non-respiratory tuberculosis, the death-rate from which is about one-third of what it was before the war. Next in order come heart diseases, phthisis, diphtheria and pneumonia. Note especially how phthisis now accounts for less than half the number of deaths which it produced in the first period under review. It is interesting to find that the death rates from conditions to which the public health services have devoted particular attention have been reduced rather more than the others—tuberculosis and heart disease

show a greater reduction than pneumonia and violence, while diphtheria occupies an intermediate position.

Thus :—

Death rate reduced by more than 50% :

	Reduction.
Tuberculosis (Non-Respiratory)	67%
Heart Diseases	63%
Phthisis	59%

Death rate reduced by 25—50% :

Diphtheria	44%

Failure to reduce Death rate by 25% :

Pneumonia	17%
Violence	Increase (26%)

I repeat, the observation is interesting ; it would be foolish to say more. A very great improvement in the social conditions of the people has taken place during recent years, and to this may be attributed the greater part of the improvement in the nation's health. But the school medical service has certainly played its part ; its educational function alone must do much to improve the condition of the children. Who will deny, for example, that the regular examination of the hearts of children who are apparently in good health does tend towards the earlier ascertainment, and therefore greater care of cardiac abnormality ? Would it be reasonable, therefore, to attribute the reduction in mortality from heart diseases solely to the improvement in general social conditions ?

Let us now consider certain causes of death in greater detail.

Deaths from Violence.

The surprising thing about the death-rate from violence is that the increase has been comparatively slight. It is true that as a major cause of death violence has advanced from eighth to third place in the case of pre-school children, and from fifth to second place both among school children and in the young adult group ; but the actual increase in death-rate has been small. In fact, in the pre-school group the mortality has fallen from 0.67 per 1,000 to 0.56, and this very nearly compensates for the increase in the other groups.

Violence—Death Rates in Three Groups.

(per 1,000 population in each group).

	Period 1903—1912	Period 1928—1937
Pre-school group	0.67	0.56
School group	0.17	0.19
Young adult group	0.15	0.29
Death Rate :		
Ages 1-24	0.26	0.29

per 1,000 population at these ages.

What is the explanation ?

It rests, probably, upon a fallacy of which I was not unaware when undertaking this investigation ; that the contents of the group of deaths by violence (classified as "Accidents" until 1911) have altered so much that no true comparison can be drawn between the returns for earlier and more recent years. Under "Violence" are classified "all deaths from unnatural causes," with the exception of suicides. It includes conditions as widely separated as poisoning and sunstroke. It is probable that a fair proportion of deaths by violence nowadays are due to road accidents, and that if these were separated from the rest we would find a very marked increase during recent years. (In Leicester City during 1937, of 10 deaths by violence between the ages of one and fifteen, 5 were due to street accidents ; but the proportion is probably much smaller in country districts.) On the other hand, in these days of smaller families and "only-childism," deaths due to various accidents in the home,—scalds and burns, falls, injury by animals and so on—are probably much less common than formerly.

So far as the school child is concerned, it is gratifying to find that in spite of the increasing dangers of the road, the death rate from violence has shown no significant increase. But are all, or any, of these deaths—about nine every year—unavoidable ? Is sufficient effort being made to make the school child appreciate the physical dangers which surround it, on the roads, at play, in the home ?

Diphtheria.

It will be seen from Table II that the mortality from diphtheria at school age has fallen from 0.36 per 1,000 at the beginning of the century to 0.20 during the last five years ; but that diphtheria is now the chief destroyer of school children.

A number of factors have arisen, during the present century, which might be expected to reduce the mortality from this disease. The principal of these are :—

(*a*) The general improvement in social conditions.
(*b*) Better understanding of disease on the part of parents and teachers.
(*c*) Decreasing size of families.
(*d*) Better facilities for laboratory diagnosis.
(*e*) Improved methods of treatment—better general nursing, more efficient employment of antitoxin, methods such as oxygen administration, intubation etc.
(*f*) Discovery of effective preventive methods. (Diphtheria immunisation.)

It is obviously important that we should attempt to arrive at some estimate of the factors which have actually caused the fall in mortality during the period under review, in order that we may decide whether the improvement is likely to continue. The following calculations, I think, supply an answer.

Let us first compare the death rates from diphtheria in Leicestershire with those for England and Wales.

TABLE III—DEATH RATES FROM DIPHTHERIA.

(per 1,000 population—all ages.)

	1901-1910	1911-1920	1921-1930	1933-1937
Leicestershire	0.19	0.15	0.08	0.07
England & Wales	0.18	0.14	0.08	0.08

The declining curve of mortality in Leicestershire follows so closely that for England and Wales as a whole, that whatever factors produced it were probably national rather than local.

The next question to decide is whether the decline is due to the occurrence of fewer cases, or to lowered case-mortality, or a combination of both. The following table shows the number of cases, the number of deaths, and the case mortality, in five-year periods :—

TABLE IV—LEICESTERSHIRE: DIPHTHERIA INCIDENCE AND CASE MORTALITY.

	Cases	Deaths	Case Mortality		Cases	Deaths	Case Mortality
1903-1907	1,375	211	15.3%	1923-1927	1,463	97	6.6%
1908-1912	1,500	164	10.9%	1928-1932	1,370	95	6.9%
1913-1917	1,386	174	12.6%	1933-1937	1,320	91	6.9%
1918-1922	1,799	189	10.5%	**Last 35 years**	10,213	1,021	10%

It will be seen that the case mortality has declined, while the actual number of cases has remained fairly constant. Since the beginning of the century the number of notifications each year has undergone a fairly regular swing, with wave-peaks every seven or eight years ; but there has been nothing to justify the hope that the disease is becoming less common. It is significant that after falling to 6.6% in the period 1923-1927, the case mortality has risen slightly during recent years.

I set out above the factors which may have influenced the general decline in the diphtheria death rate. All of these except the last—immunisation, which has never been carried out on a large scale in this county—have undoubtedly contributed ; but the fact that the decline is due to a reduction in case mortality makes it likely that earlier diagnosis and more effective serum treatment have played the principal part.

What of the future? Dr. Selby, in reviewing the first five years of the County Isolation Hospital at Markfield, recorded that in 1933 to 1937, the average mortality for cases admitted to hospital "was 5.8 per cent. but it must be noted that half the deaths occurred within 24 hours of admission." Obviously, if earlier diagnosis could be ensured, the fatality rate might be further reduced. But is this possible ? Does it not look as if our educational work at clinics and schools, our curative therapy in hospital, have already achieved as much as can be expected of them in the present state of things ? Diphtheria is a disease which can establish itself unobserved in the throat of even the most carefully tended child—and even if detected in the early stages, it spells worry and distress, if not actual danger to life.

The fact is that the measures which have been employed up to the present have not checked the disease ; and there is no indication of any further decline in the death rate in the immediate future. Curative medicine, in this disease, has shot its bolt.

In thirty-five years diphtheria has wiped out over a thousand people in this county—young people, useful lives ; this, a preventable disease ! The value of active immunisation has been fully proved over and over again ; reliable, painless, inexpensive methods have been available for nearly ten years ; yet in 1936 there were thirty-two deaths in Leicestershire and over three thousand in England and Wales.

Preventable, but not Prevented.

The most remarkable features of the table of causes of death among school children during recent years, is that the condition which heads the list is the most eminently preventable of them all. "Our children die from diphtheria because we let them die ; not because we cannot prevent them from dying."* The explanation of this ghastly paradox is bound up with our whole attitude to medicine —and life.

No civilization of which we have knowledge has been more humanitarian in its outlook than our own. We value human life for its own sake. We are proud of our system of medicine, which is nearer to perfection than any the world has ever seen before. Yet we refuse to put into effective operation a life-saving device which has been fully tried and tested.

The research worker carries out his part of the scheme magnificently ; it is in the practical application of his discoveries that we fail so badly. It has been pointed out that "our knowledge of diphtheria . . . is far in advance of that of any other human disease" and that we possess "a means of prevention which is 100 per cent. proof against fatality and 90 per cent. proof against attack"*; yet the slaughter of the innocents goes on.

It seems to me that the very basis of our medicine is faulty. It has frequently been pointed out that Hippocratic medicine laid great stress upon the outlook in disease—Prognosis—neglecting what we regard as more important matters—research into causation

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*"Medical Officer," 10th December, 1938. Leader on Diphtheria.

and methods of treatment. To my mind our system of medicine is far too closely bound up with the pursuit of knowledge for its own sake—the soulless work of pure research. Our remedies are discovered in the laboratory, often by accident, frequently by people who have no interest in living patients. We tend to neglect the treatment of the individual as a person, and especially, to overlook the possibilities of active preventive methods.

I see in Western medicine an entirely different *kind* of medicine from that pursued by the Classical peoples. It has always been assumed that the one is a continuation of the other, and that we are the inheritors of the medicine of Hippocrates. "Nothing moves in the modern world that is not Greek." It would be about as true to say that Shakespeare's greatness sprang from the writers from whom he borrowed his plots. Certain knowledge we have taken over from the works of Greek and Roman writers ; but we have built something quite different on this foundation from anything which Classical medicine achieved. Our interests are different ; and just as their minds had a blind spot where exact diagnosis was concerned, so ours have too little regard for the actual handling of disease.

We classify disease, not by methods of treatment, but according to the organ affected and the precise nature of the lesion. Our textbooks of medicine devote three times as much space to Aetiology and Pathology as they do to treatment, and give only a line or two to the prognosis which interested the Greeks before all else. It is not unusual to find under "Treatment," the bald admission that no effective treatment is known ; but where the causation is in doubt the writer fills pages with fruitless speculation. When the diagnosis lies between two conditions, the treatment of which is identical, we still take great pains to distinguish between them, often subjecting the patient to discomfort or inconvenience to make this possible. The average medical student will admit that he finds his lectures on Therapeutics far less interesting than the Pathology course ; and you will search in vain for half a dozen textbooks on treatment which will bear comparison with the countless admirable works on Pathology which have been turned out in the last twenty years.

Even the layman shows the bias towards research ; how often do we hear a patient's relatives make the suggestion that "he ought to be X-rayed," as if that alone would benefit him.

On a basis of exact diagnosis we have built up a magnificent

system of medicine, but it is time we realized that it is only when knowledge leads to effective action that it can contribute to the real welfare of mankind. Too long has our interest spent itself upon research. While we fiddle about in laboratories, children are dying; but we can save them if we will.

How long must this waste of precious lives continue?

Summary.

1. For over two thousand years the importance of the age incidence of disease has been recognised.

2. The principal causes of death among young people in Leicestershire, during the last thirty-five years, are reviewed; with special reference to the school child, and the mortality from violence and diphtheria.

3. It is pointed out that of the causes of death among school children, that which heads the list—diphtheria—is the most eminently preventable of them all.

4. The suggestion is put forward that in Western medicine too much emphasis is laid upon Exact Diagnosis, and too little upon the practical application of methods of treatment.

A. W. STOPFORD THOMPSON,
Senior Assistant School Medical Officer.

(2) **MYOPIA.**

During school life the myopic child is always a source of anxiety to anyone responsible for the treatment of his eyes. The condition of short sight is caused by an elongation of the eyeball whereby all distant objects are focussed in front of the retina. The result is a marked interference with distant vision causing serious incapacity in all but the mildest cases. Near vision is not impaired, in fact the near point of the eye is brought nearer to the cornea and close work can be undertaken with relative ease.

Until adult life, myopia is progressive in a large majority of cases. Out of 289 myopic children examined during 1938, 270 showed an increase in their short sight. Five out of the remaining 19 had an unchanged error for four years, 7 were unchanged after two years and 7 after one.

The age at which the myopia is first diagnosed varies. Early diagnosis is a great advantage, as treatment tends to check the progress of the short sight and should start at the earliest possible moment. This early diagnosis is often difficult to achieve, as except in mild cases symptoms of eyestrain such as headaches, styes, etc. are rare. Sometimes an apparent internal squint will direct attention to an oncoming myopia. As the myopia advances distant vision becomes so defective that the child makes no attempt to focus objects beyond its far point. Such cases are usually discovered as a result of the child complaining that it cannot see the blackboard or more frequently diagnosed by the school medical officer at an intermediate medical inspection.

I have appended a table showing the ages at which 289 cases of myopia, whom I examined in 1938, were first referred to me.

Age in years when first seen	No. of children
5	6
6	8
7	13
8	63
9	46
10	28
11	39
12	66
13	19
14	1

The commonest ages for the first examination seem to be 8—12 years and I think it may legitimately be assumed that this period is the one during which myopia is most likely to begin.

Unfortunately, owing to the difficulties of early diagnosis, the condition is often well established before the children are sent for examination. I have made a list of the errors found at the first examination of these 289 cases, and although the majority have an error of – 3D or less, there are 80 cases with 3D to 12D error who have previously received no treatment.

This is admittedly an unsatisfactory state of affairs, but one which I find it difficult to remedy.

Myopic error at first examination.	Number of children.
Less than – 1.0 D	63
– 1.0 to – 2.0 D	85
– 2.0 to – 3.0 D	61
– 3.0 to – 4.0 D	37
– 4.0 to – 5.0 D	13
– 5.0 to – 6.0 D	10
– 6.0 to – 7.0 D	6
– 7.0 to – 8.0 D	7
– 8.0 to – 9.0 D	2
– 9.0 to – 10.0 D	2
– 10.0 to – 11.0 D	1
– 12.0 D and over	2

(For the sake of simplicity throughout this article I have calculated the myopic error from the spherical error only, disregarding all cylindrical corrections, and choosing the greater spherical error in all cases of anisometropia.)

Cases of myopia fall roughly into two groups, the first a "simple" type and the second a more progressive or malignant type. Actually both forms tend to progress during the growth period, but the rate of increase is always more rapid in the second group and the age of onset earlier.

Sir Edward Duke-Elder has described simple myopia as being caused by an exaggerated physiological process, whereby every eye tends towards emmetropia at about 9—10 years of age. In early

life the large majority of eyes are hypermetropic and the hypermetropia diminishes steadily until the child is 9 years old and then remains practically stationary. In actual fact very few cases achieve exact emmetropia, the majority stop short of this and remain as cases of slight hypermetropia. If the original hypermetropic error is small and the decrease towards normal is rapid then some cases would seem to overstep the normal limit and become myopic. Cases of myopia which arise early in life (i.e. before the age of 8 years) are on this theory presumably the more progressive type, and if the usual standard of classifying all cases with an error greater than –6D as progressive be adopted, then from the clinical findings there were observed to be at least 47 cases of progressive myopia among the 289 in the series.

The seriousness of these 47 cases is accentuated by their greater tendency to degenerative changes at the back of the eye. The commonest form of this is the so-called myopic crescent resulting from a thinning of the choroid in the region of the papilla. More advanced fundus changes are fortunately exceptional amongst myopic school children.

The aetiology of myopia is obscure but in the second group of progressive cases a hereditary cause can often be traced. In school medical work it is difficult to obtain accurate evidence about a child's relatives. Often no parent accompanies the child, who is obviously an unreliable witness. Even adult relatives frequently consider that anyone who wears glasses must of necessity be "short sighted," whereas a grandparent who manages to read without glasses at 70 odd years of age is regarded with pride as having phenomenally strong sight. In spite of these difficulties I have found ample evidence to support the theory that there is a strong hereditary influence in cases of the so-called malignant type and not uncommonly a whole family of children of a myopic parent will have inherited the same condition. In addition to heredity, other factors undoubtedly predispose to short sight. Prolonged ill health is a frequent accompaniment of short sight and the delicate type of quiet serious minded "myope" is a familiar sight to the school oculist.

In view of this it might be assumed that myopia would be more common amongst the children of the very poor, but this is to overlook the fact that ill health is a wider term than malnutrition and that both are dependent on other factors besides family income.

Children who have myopic eyes are in a large majority of cases

intelligent and very studious. Some authorities have attributed their fondness for reading to the fact that the myopia limits their distant field of vision and throws them back on to close work for entertainment. In my experience many of the children are heavy readers long before they acquire myopia, and often with a low degree of diminishing hypermetropia a disposition to prolonged reading may be almost diagnostic of approaching myopia. Seven of the children in the above list had binocular hypermetropia in 1937 and binocular myopia in 1938.

The management of all cases of short sight amongst school children is directed solely to checking the tendency of the myopia to increase during the growth period. There is actually no "cure" for short sight since it is dependent upon the shape of the eyeball. There is, however, no doubt that treatment does tend to arrest its progress and so to limit the ultimate disability from which the child will suffer in adult life.

Of the 289 cases examined in 1938, 122 were first inspections.

Of the other 167, 19 had developed no increase in myopia during the previous years they were under observation. The remaining 148 had increased according to the figures shown below :—

Average annual increase in dioptres.	Number of children affected.
No increase	19
Less than – 1.0 D	111
– 1.0 D to – 1.5 D	32
– 1.5 D to – 2.0 D	4
– 2.0 D to – 2.5 D	1
Total	167

As an increase of more than one dioptre is not compatible with good progress we must conclude that 37 of these cases had not maintained a satisfactory result in spite of the treatment they had received.

The first essential in the treatment of myopia is that every case should be examined at regular and reasonably short intervals. For school children a maximum interval of a year should be allowed, and

in cases where the increase is greater than one dioptre even a six monthly interval is preferable. The examination must always be carried out under a mydriatic and as in all work amongst children the only satisfactory dilation is given by atropine. In this county, homatropine and cocaine lamellæ are used in all routine cases, but as far as possible exceptions are made in cases of myopia who are seen under full atropine mydriasis. Glasses are ordered in all cases for constant use. Fortunately these children quickly realise that they can see better with their glasses and they therefore offer no objection to wearing them. I have found it is a good plan to explain to parents at the first examination that the glasses will be a permanent necessity; this saves the parent from the disappointment, and me from the reproach that when the child leaves school the glasses will not have "cured" the short sight.

The general care of all children who suffer from myopia is also of great importance and the co-operation of both parents and teachers is necessary for this. A good light and a good posture must be insisted on for all close work and the children must be excused such school lessons as involve prolonged eyestrain. I am frequently indebted to teachers for the help they give in the management of these cases and for their ingenuity in avoiding tiring lessons and substituting tasks of interest.

The question of home work fortunately does not arise amongst elementary school children, but especially in the rapidly progressive cases I advise parents not to permit the children to do very much close work during the evenings. This is such an important point in the management of these children's eyes that in two cases I have reluctantly, and in collaboration with one of the local consultant oculists, advised a parent against accepting a scholarship to a secondary school where a great deal of homework is set.

It is admittedly difficult to restrain myopic children from reading too much at the end of their day's school work. Some parents readily accept the responsibility of seeing that their children do not read for more than half an hour at a time and that the children always have a good light and do not read in bed at night when they should be asleep. But many parents seem indifferent to the amount of rest their children have, and others admit weakly that they cannot control the length of time which the child spends poring over his books, with the result that the child's short sight increases rapidly.

Rest and general hygiene are matters of equal importance to the myopic child. Once the defect has started particular attention must be paid to the child's general health, which as I have stated above exerts a direct influence on the prognosis of these cases. A good diet, plenty of fresh air and exercise and above all sufficient sleep must be insisted on. With sensible parents and a good understanding between the child and the adults who are responsible for his welfare I am convinced that much may be done to keep the majority of myopic errors within reasonable limits.

While the elementary school children still leave school at the age of 14 we can have no assurance that after that age the careful supervision of their sight will be maintained. The period of progress as I have explained extends to adult life, and if the child undertakes unsuitable work, or works in an unfavourable atmosphere, much harm may be done in the 5—6 years after which he or she leaves school. Such factory work as "linking" which so many girls lightheartedly undertake on leaving school involves prolonged fine work and is totally unsuited to the myopic individual. The work which many children do is more often decided by the district in which they live and the opportunity which it affords for earning a maximum wage, than by the child's own interest or the welfare of its eyes and health.

In severe cases of myopia the head teacher of the child concerned will, however, often go to great pains to find a suitable occupation for the child and to persuade his parents to accept it. Failing that, steps are sometimes taken through the Juvenile Employment Exchange to ensure that the child does not have to undertake tasks likely to be deleterious to his sight and the parents are then left to find an alternative occupation.

CONSTANCE WALTERS,
School Oculist.

ELEMENTARY SCHOOLS.

TABLE I.

Medical Inspection of Children Attending Public Elementary Schools, Year Ended 31st December, 1938.

A.—Routine Medical Inspections.

Number of Code Group Inspections.

Entrants	3,928
Second Age Group	3,179
Third Age Group	3,074
Total	10,181
Number of other Routine Inspections	434

B.—Other Inspections.

Number of Special Inspections	3,249
Number of Re-Inspections	2,784
Total	6,033

TABLE II.

A.—Return of Defects found by Medical Inspection in the Year ended 31st December, 1938.

DEFECT OR DISEASE. (1)		ROUTINE INSPECTIONS. No. of Defects. Requiring Treatment. (2)	ROUTINE INSPECTIONS. No. of Defects. Requiring to be kept under observation, but *not* requiring Treatment. (3)	SPECIAL INSPECTIONS No. of Defects. Requiring Treatment. (4)	SPECIAL INSPECTIONS No. of Defects. Requiring to be kept under observation, but *not* requiring Treatment. (5)
Skin	Ringworm :				
	Scalp	1	—	5	—
	Body	2	—	26	—
	Scabies	11	—	24	—
	Impetigo	6	2	96	—
	Other Diseases (Non-Tuberculous)	12	3	131	4
Eye	Blepharitis	64	19	82	—
	Conjunctivitis	8	4	11	—
	Keratitis	—	—	—	—
	Corneal Opacities	—	—	2	—
	Defective Vision (excluding Squint)	516	17	212	5
	Squint	162	14	39	1
	Other Conditions	12	6	11	3
Ear	Defective Hearing	12	—	20	4
	Otitis Media	31	13	87	2
	Other Ear Diseases	14	14	18	4
Nose and Throat	Chronic Tonsillitis only	429	550	135	20
	Adenoids only	89	87	51	5
	Chronic Tonsillitis & Adenoids	148	73	179	6
	Other Conditions	4	4	28	6
Enlarged Cervical Glands (Non-Tuberculous)		9	23	29	6
Defective Speech		—	—	2	2
Heart and Circulation	Heart Disease :				
	Organic	20	28	15	42
	Functional	3	13	1	9
	Anæmia	98	34	31	1
Lungs	Bronchitis	24	8	8	—
	Other Non-Tuberculous Diseases	8	49	5	2
Tuberculosis	Pulmonary :				
	Definite	—	—	—	—
	Suspected	1	1	7	4
	Non-Pulmonary :				
	Glands	—	—	5	—
	Bones and Joints	—	—	1	—
	Skin	—	—	—	—
	Other Forms	—	3	—	—
Nervous System	Epilepsy	—	1	6	1
	Chorea	1	—	13	16
	Other Conditions	1	4	2	2
Deformities	Rickets	3	3	2	—
	Spinal Curvature	3	2	3	3
	Other Forms	20	32	36	6
Other Defects and Diseases		49	41	1,176	574
Total Number of Defects		1,761	1,048	2,499	728

TABLE II.—continued.

B.—Number of individual Children found at Routine Medical Inspection to require Treatment (excluding Defects of Nutrition, Uncleanliness and Dental Diseases).

Group.	For defective vision (excluding squint)	For all other conditions recorded in Table II A.	Total.
(1)	(2)	(3)	(4)
Entrants	7	544	551
Second Age Group	231	334	565
Third Age Group	242	257	499
Total	480	1,135	1,615
Other Routine Inspections	36	45	81
Grand Total	516	1,180	1,696

C.—Classification of the Nutrition of Children Inspected during the Year in the Routine Age Groups.

Age-groups	No.of Chil-dren Insp'd	A (Excellent)		B (Normal)		C (Slightly sub-normal)		D (Bad)	
		No.	%	No.	%	No.	%	No.	%
Entrants	3928	664	16.9	2939	74.8	312	7.9	13	0.3
Second Age-group	3179	478	15.0	2486	78.2	211	6.6	4	0.1
Third Age-group	3074	636	20.7	2240	72.9	192	6.2	6	0.2
Other Routine Inspections	434	96	22.1	316	72.8	21	4.8	1	0.2
TOTAL	10615	1874	17.7	7981	75.2	736	6.9	24	0.2

TABLE III.

Return of all Exceptional Children in the Area.

CHILDREN SUFFERING FROM MULTIPLE DEFECTS.

Children suffering from the following types of Multiple Defect, *i.e.*, any combination of Total Blindness, Total Deafness, Mental Defect, Epilepsy, Active Tuberculosis, Crippling, or Heart Disease 8

BLIND CHILDREN.

At Certified Schools for the Blind.	At Public Elementary Schools.	At Other Institutions.	At no School or Institution.	Total.
2	—	—	—	2

PARTIALLY BLIND CHILDREN.

At Certified Schools for the Blind.	At Certified Schools for the Partially Blind.	At Public Elementary Schools.	At other Institutions.	At no School or Institution.	Total.
10	—	3	1	8	22

DEAF CHILDREN.

At Certified Schools for the Deaf.	At Public Elementary Schools.	At other Institutions.	At no School or Institution.	Total.
15	—	—	1	16

TABLE III.—continued.

PARTIALLY DEAF CHILDREN.

At Certified Schools for the Deaf and Partially Deaf	At Public Elementary Schools.	At other Institutions.	At no School or Institution.	Total.
1	1	—	—	2

MENTALLY DEFECTIVE CHILDREN.

Feeble-Minded Children.

At Certified Schools for Mentally Defective Children.	At Public Elementary Schools.	At other Institutions.	At no School or Institution.	Total.
14	95	1	51	161

	Males	Females	Total
Notified to the Local Mental Deficiency Authority *during the year*	7	4	11

EPILEPTIC CHILDREN.

Children Suffering from Severe Epilepsy.

At Certified Special Schools.	At Public Elementary Schools.	At other Institutions.	At no School or Institution.	Total.
1	—	—	4	5

TABLE III.—continued.

PHYSICALLY DEFECTIVE CHILDREN.

A. Tuberculous Children.

I.—Children suffering from Pulmonary Tuberculosis.

At Certified Special Schools.	At Public Elementary Schools.	At other Institutions.	At no School or Institution.	Total.
8	26	—	16	50

I I.—Children suffering from Non-Pulmonary Tuberculosis.

At Certified Special Schools.	At Public Elementary Schools.	At other Institutions.	At no School or Institution.	Total.
17	62	9	22	110

B.—Delicate Children.

At Certified Special Schools.	At Public Elementary Schools.	At other Institutions.	At no School or Institution.	Total.
—	49	—	18	67

C.—Crippled Children.

At Certified Special Schools.	At Public Elementary Schools.	At other Institutions.	At no School or Institution.	Total.
8	148	—	64	220

TABLE III.—continued.

D.—Children with Heart Disease.

At Certified Special Schools.	At Public Elementary Schools.	At other Institutions.	At no School or Institution.	Total.
—	18	—	8	26

TABLE IV.

Return of Defects treated during the year ended 31st December, 1938.

Treatment Table.

Group I.—Minor Ailments (excluding Uncleanliness, for which see Group V I.)

Disease or Defect.	Number of Defects treated, or under treatment during the year.		
	Under the Authority's Scheme.	Otherwise.	Total.
(1)	(2)	(3)	(4)
Skin—			
Ringworm-Scalp—			
(i.) X-Ray Treatment	—	—	—
(ii.) Other Treatment	8	41	49
Ringworm-Body	22	1	23
Scabies	21	26	47
Impetigo	91	189	280
Other skin disease	112	14	126
Minor Eye Defects—			
(External and other, but excluding cases falling in Group II.)	86	23	109
Minor Ear Defects	49	36	85
Miscellaneous—			
(*e.g.*, minor injuries, bruises, sores, chilblains, etc.)	601	35	636
Total	990	365	1,355

TABLE IV.—continued.

Group II.—Defective Vision and Squint (excluding Minor Eye Defects treated as Minor Ailments—Group I.)

Defect or Disease.	No. of Defects dealt with.			No. of children for whom spectacles were			
				Prescribed (1)		Obtained (2)	
	Under the Authority's Scheme.	Otherwise.	Total.	(i) Under the Authority's Scheme.	(ii) Otherwise.	(i) Under the Authority's Scheme.	(ii) Otherwise.
Errors of Refraction (including squint).	1,684	37	1,721				
Other Defect or Disease of the Eyes (excluding those recorded in Group I.)	183	—	183				
Total	1,867	37	1,904	1,527	37	1,389	32

Group III.—Treatment of Defects of Nose and Throat.

Number of Defects													
Received Operative Treatment.												Received other forms of Treatment.	Total number treated.
Under the Authority's Scheme, in Clinic or Hospital. (1)				By Private Practitioner or Hospital, apart from the Authority's Scheme. (2)				Total. (3)				(4)	(5)
(i)	(ii)	(iii)	(iv)	(i)	(ii)	(iii)	(iv)	(i)	(ii)	(iii)	(iv)		
–	9	356	–	–	–	42	–	–	9	398	–	—	407

(i) Tonsils only. (ii) Adenoids only. (iii) Tonsils and adenoids. (iv) Other defects of the nose and throat.

TABLE IV.—continued.

Group IV.—Orthopaedic and Postural Defects.

	Under the Authority's Scheme. (1)			Otherwise. (2)			Total number treated.
	Residential treatment with education. (i)	Residential treatment without education. (ii)	Non-residential treatment at an orthopaedic clinic. (iii)	Residential treatment with education. (i)	Residential treatment without education. (ii)	Non-residential treatment at an orthopaedic clinic. (iii)	
Number of children treated	36	4	303	—	—	—	343

Group V.—Dental Defects.

(1) Number of Children who were :—

(*a*) Inspected by the Dentist :

	Age.	No.		
Routine Age Groups	5	2743	Total	23,325
	6	2976		
	7	3033		
	8	2790		
	9	2797		
	10	2520		
	11	2406		
	12	2074		
	13	1662		
	14	312		
	15	12		

Specials 1,092

GRAND TOTAL 24,417

(*b*) Found to require treatment 15,610

(*c*) Actually treated 12,872

(2) Half-days devoted to { Inspection.... 328 / Treatment 2,111 } Total 2,439

(3) Attendances made by children for treatment 17,249

Group V. Dental Defects—continued.

(4) Fillings	Permanent teeth	16,362		
	Temporary teeth	32	Total	16,394
(5) Extractions	Permanent teeth	1,420		
	Temporary teeth	13,569	Total	14,989
(6) Administrations of general anæsthetics for extractions				7
(7) Other operations	Permanent teeth	22		
	Temporary teeth	104	Total	126

Group V I.—Uncleanliness and Verminous Conditions.

(i.) Average number of visits per school made during the year by the School Nurses	7.5
(ii.) Total number of examinations of children in the Schools by School Nurses	110,247
(iii.) Number of individual children found unclean	5,090
(iv.) Number of children cleansed under arrangements made by the Local Education Authority	—
(v.) Number of cases in which legal proceedings were taken :—	
(*a*) Under the Education Act, 1921	—
(*b*) Under School Attendance Byelaws	—

SECONDARY SCHOOLS.

TABLE I.

Number of Children Inspected from 1st January, 1938 to 31st December, 1938.

A.—**Routine Inspections.**

Age	5	6	7	8	9	10	11	12	13	14	15	16	17	18	Total
Males	–	–	–	4	10	27	128	258	28	51	188	30	–	–	724
Females	10	6	5	10	12	40	157	214	26	14	199	8	1	–	702
Total	10	6	5	14	22	67	285	472	54	65	387	38	1	–	1,426

B.—**Special Inspections.**

	Specials.	Re-Inspections.
Males	4	115
Females	6	78
Total	10	193

C.—**Total Number of Individual Children Inspected by the Medical Officers whether as Routine or Special cases.**

Number of individual children inspected 1,629

TABLE II.

A.—Return of Defects found in the course of Routine Medical Inspection in 1938.

Defect or Disease.	Routine Inspections.	
	Number referred for Treatment.	Number required to be kept under observation but not referred for treatment.
Malnutrition	—	—
Uncleanliness, Head	—	—
Skin .... Impetigo	—	—
Skin .... Scabies	—	—
Skin .... Other Diseases—non-Tuberculous	1	1
Eye .... Defective Vision	159	35
Eye .... Squint	3	2
Eye .... External Diseases	7	—
Ear Defective Hearing	1	—
Ear Ear Disease	1	1
Nose and Throat Enlarged Tonsils and Adenoids	1	—
Nose and Throat Enlarged Tonsils	38	35
Nose and Throat Adenoids	3	1
Nose and Throat Other Conditions	2	1
Teeth	—	60
Cervical Glands	5	2
Defective Speech	—	—
Heart Organic	1	1
Heart Functional	—	—
Heart Anæmia	—	—
Lungs—Non-Tubercular Diseases	—	—
Tuberculosis Pulmonary Definite	—	—
Tuberculosis Pulmonary Suspected	—	—
Nervous System Chorea	—	1
Nervous System Other Conditions	—	—
Deformities Spinal Curvature	2	2
Deformities Flat Foot	58	10
Deformities Other Forms	4	5
Enlarged Thyroid Gland	—	—
Other Diseases or Defects....	—	—

B.—Number of Individual Children found at Routine Medical Inspection to require treatment (excluding Uncleanliness and Dental Diseases.)

Number inspected	1,426
Requiring treatment	266
Percentage requiring treatment	18.6